LOUISVILLE METRO

PUBLIC HEALTH & WELLNESS

2009










Health Status Assessment Report

LOUISVILLE METRO
PUBLIC HEALTH & WELLNESS

Director:
Adewale Troutman, M.D., M.A., M.P.H.

2009 Health Status Assessment Report

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LOUISVILLE, KENTUCKY

LOUISVILLE METRO PUBLIC HEALTH & WELLNESS

JERRY E. ABRAMSON
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ADEWALE TROUTMAN, MD, MA, MPH
Director

To the Readers of this Report:

This is the sixth annual health status report for the Louisville Metro community. One of the core functions of public health is assessment and this report is part of our commitment to our duty to assess the status of the health of the community. This report is intended to educate the community on the key indicators that reflect our health status. We aim to provide the most recent data available to use by to promote community discussion of health issues and collaboration that will lead to a healthier community.

The report also addresses some of the health inequities that exist in our community. Only by understanding the inequities and the association between inequities and social determinants of health, can we correct the injustices that exist in our health care system. Social determinants of health, as mentioned here, refer to social and economic indicators such as race, income, education and neighborhood that have significant impact on an individual's health.

We are excited about the opportunity to provide information that will initiate community discussion and encourage community partners to become involved in the formulation of the opportunities to improve the health of Louisville Metro. By working together we can achieve the goal of maximizing the health of all Louisville Metro residents.

We are also committed to improving and expanding this report each year. If you have suggestions or comments, please contact our Office of Policy Planning and Evaluation at 502-574-8270.

Sincerely,

Adewale Troutman, M.D., M.P.H., M.A.
Director

Executive *Summary*

One of the core functions of a public health department is to assess the health needs of the community. This health status report is part of our assessment of the Louisville Metro community and includes indicators in the following areas:

- Demographic and Social Profile
- Maternal and Child Health
- Causes of Death
- Chronic Diseases
- Behavioral Risk Factors
- Oral Health
- Mental Health
- Injury
- Childhood Lead Exposure
- Communicable Diseases

Each chapter of the report contains the following sections, which are included as appropriate:

- ***What is it?*** – A definition of the health indicator
- ***Why is it important?*** – A review of the importance of examining this area
- ***What is Louisville Metro's status?*** – A review of the relevant health data
- ***What are we doing?*** – Related program activities
- ***What else do we need to do?*** – Future plans and actions

Data sources utilized in this report include birth and death statistics, hospital discharge, U.S. Census, cancer data, as well as data collected and maintained at Louisville Metro Department of Public Health and Wellness (LMPHW). Comparisons to state and national data, Healthy People 2010, trends over time, and geographic distributions are included on selected indicators.

Demographic and Social Profile

- As of 2008, Louisville Metro had an estimated population of 731,877. Between 2000 and 2008, the population of Whites declined by 3%. Following the national trend, growth among the Hispanic population increased by 82%. The African American population also showed a steady increase since 2000, but began to decline between 2007 and 2008.
- The largest changes in the distribution of age in the Louisville Metro population between 2000 and 2008 were a 12% decrease in the 35 to 44 year old age group and a 43% increase in the 55 to 64 year old age group.
- As of 2008, the median household income in Louisville Metro was $46,745, remaining lower than the median income for the nation ($50,303).
- Based on 2008 estimates, approximately 12% of Louisville Metro residents 25 years and older have not earned a high school diploma.
- The annual unemployment rate in Louisville Metro was 6.3 in 2008, compared to 5.8 in the nation.
- In 2008, Eighty-five percent of Louisville Metro residents reported some type of health care coverage. This is slightly higher the nation (83%) and slightly lower than the state (86%). Yet, the percent for Louisville Metro African Americans reporting health care coverage decreased between 2004 and 2008.

Maternal and Child Health

- The number of live births in Louisville Metro was 10,353 in 2006. This is a 4.8% increase from the previous year.
- The infant mortality rate for Louisville Metro in 2006 (8.0 deaths per 1,000 live births) was higher than the Healthy People 2010 national goal and the reported rates for the state and nation.
- In 2006, 10.1% of the births were classified as low birth weight and of these, 21.9% were very low birth weight. The percent was highest to American Indian mothers (16.7%), followed by African American mothers (15.5%) and White mothers (8.3%).
- In 2006, nearly one-third of the African American women (32.0%) did not receive prenatal care in the first trimester, followed by American Indians (16.7%), Whites (16.2%), and Asian/Pacific Islanders (10.1%).
- African American females 15 to 19 years of age had a teen birth rate three times higher than that of White females (12.8 per 1,000 births compared to 3.4).
- Almost 28% of women who gave birth to a low birth weight infant reported smoking during pregnancy.

Causes of Death

- The age-adjusted death rate from all causes was 947.6 per 100,000 population in 2006. This rate was higher than state (915.2) and national (776.5) rate.
- For Louisville Metro African Americans, the age-adjusted death rate from all causes was 39% higher than the rate for Louisville Metro Whites.
- The age-adjusted death rate for males was 57% higher than the female rate.
- The leading causes of death in 2006 were the same as the previous year:
  1. Diseases of the Heart
  2. Lung Cancer
  3. Chronic Obstructive Pulmonary Disease
  4. Stroke
  5. Unintentional Injuries
  6. Diabetes
  7. Alzheimer's Disease
  8. Kidney Disease
  9. Colon or Anal Cancer
  10. Influenza and Pneumonia
- Of the top five causes of death, men had higher death rates for heart disease, lung cancer, chronic obstructive pulmonary disease, stroke, and unintentional injuries than women.
- Of the top five causes of death, African Americans had a higher death rate from diseases of the heart, lung cancer, stroke, and unintentional injuries. Whites had a higher death rate from chronic obstructive pulmonary disease.

Chronic Diseases

Diseases of the Heart

- The age-adjusted rate of death for diseases of the heart in Louisville Metro during 2006 was 216.2 per 100,000 population. This rate exceeds the Healthy People 2010 goal of 166.
- The death rate for African Americans was 24% higher than the rate for Whites.

Lung Cancer

- The age-adjusted lung cancer death rate in Louisville Metro was 71.7 deaths per 100,000 population in 2006. The Louisville Metro rate was higher than the national rate of 53.0 and approximately 63% higher than the Healthy People 2010 goal of 44.8 deaths per 100,000.
- The lung cancer death rate for African Americans (112.7 per 100,000 population) was almost twice the rate for Whites (61.9 per 100,000 population).

Chronic Obstructive Pulmonary Disease (COPD)

- The age-adjusted death rate for COPD in Louisville Metro during 2006 was 56.1 per 100,000 population. The Healthy People 2010 goal is 60 deaths per 100,000.
- The age-adjusted death rate from COPD for Whites was higher than the death rate for African Americans (55.5 compared to 50.4 per 100,000).

Stroke

- The age-adjusted death rate for strokes in Louisville Metro during 2006 was 50.8 per 100,000 population. The Healthy People 2010 goal is 48 deaths per 100,000.
- The age-adjusted death rate from stroke for African Americans was higher than the death rate for Whites (59.5 compared to 48.5 per 100,000).

Diabetes

- The age-adjusted diabetes mortality rate was 32.0 deaths per 100,000 population for Louisville Metro in 2006. This rate was higher than state and national rates of 25.9 and 23.3, respectively.
- For Louisville Metro African Americans, the age-adjusted death rate from diabetes was more than double the rate for Louisville Metro Whites.
- The percent of people who reported knowing that they have diabetes increased from 10.4% in 2005 to 11.4% in 2008.

Asthma

- In 2005, 15.4% of adults surveyed in Louisville Metro reported they had asthma; this percentage increased to 19.1% in 2008. These percentages were higher than the national rate for both years (12.6% in 2005 and 13.6% in 2008).

Behavioral Risk Factors

- The 2008 Behavioral Risk Factor Surveillance System (BRFSS) survey asked respondents if during the past month they participated in any physical activities or exercise such as running, calisthenics, golf, gardening, or walking other than their regular job duties. Louisville Metro residents reported participating in physical activity at a higher percent than reported by Kentuckians, 75.8% to 69.5% respectively. This was also slightly higher than the national percentage.
- The number of Louisville Metro adults that reported they smoked tobacco increased from 26.3% in 2005 to 31.2% in 2008, with African American men reporting the highest percent (35.3%).

- The percentage of Louisville Metro residents either obese or overweight based on reported height and weight has continued to increase from previous years. In 2005, approximately 61% were either obese or overweight, compared to 64% in 2008.
- In 2008, the percent of people in Louisville Metro who reported eating five or more servings of fruits and vegetables each day (35.2%) was higher than Kentucky (18.4%) and the United States (24.4%). However, data reflects that the majority of people are still not eating the recommended daily amount of fruits and vegetables.

Oral Health

- In 2008, approximately 69% of Louisville Metro adults reported seeing a dentist during the past year, compared to 64% for Kentucky.
- Sixty percent of Louisville Metro African Americans reported having teeth cleaned during the past year, compared to 71.0% for Whites, and 69% for Louisville Metro.

Mental Health

Mental Illness

- The percentage of people who reported fourteen (14) or more days during the past month that were considered as "mentally unhealthy" was higher among Louisville Metro African Americans than their White counterparts.
- African American females reported the highest percentage of having "mentally unhealthy" days (20.4%).

Suicide

- In 2006, the Louisville Metro death rate from suicide was 13.2 deaths per 100,000 population. This rate was lower than the state but higher than the national rate and the Healthy People 2010 goal.
- The suicide rate among Louisville Metro Whites (15.1) was twice the rate of African Americans (7.3) and higher than the state and national rates.
- Males in Louisville Metro had a suicide rate six times greater than females (23.8 compared to 3.7).

Injury

Unintentional Injury

- In 2006, the age-adjusted death rate from unintentional injury was 39.7 per 100,000 population. This was lower than the state rate of 57.5, but more than twice the Healthy People 2010 goal.
- The death rate from unintentional injury for males was twice the rate for females.
- The largest category of unintentional injury deaths was motor vehicle crashes (29.3%), followed by accidental poisonings (27.2%) and falls (14.3%).
- The Louisville Metro death rate from traffic-related motor vehicle crashes (11.8 deaths per 100,000 population) was lower than the state (22.2) and national rates (15.1).

Bicycle and Pedestrian Collisions

- During the years 2000 through 2008, the number of pedestrian collisions in Louisville Metro ranged from 228 to 399 and the number of pedestrian fatalities ranged from 9 to 25. During the same period, the number of bicycle collisions varied from 117 to 185 and the number of fatalities ranged from 0 to 3.

- Approximately 73.5% of bicycle and 77.1% pedestrian collisions occurred during non-rush hours.
- Of the 25 pedestrian deaths in 2008, 18 occurred when it was nighttime, dawn, or dusk.

Homicide

- In 2006, the homicide death rate in Louisville Metro was 7.2 deaths per 100,000 population. This was higher than both state (4.6) and national (6.2) rates.
- The homicide death rate for African Americans was more than seven times that of Whites.
- The death rate for males was six times that for females.

Lead Exposure

- In 2008, about 10,870 Louisville Metro children were screened by the Louisville Metro Public Health and Wellness Childhood Lead Poisoning Prevention Program (CLPPP).
- The percentage of children exhibiting elevated blood lead levels equal or greater than 10µg/dL declined significantly between 2005 and 2007, but slightly increased in 2008 to 1.9%.
- While mean blood lead levels have steadily declined among African American and White children over the past several years, the levels for African American children remains consistently higher.

Communicable Diseases

- The incidence of newly diagnosed AIDS cases reported to the state has been fairly consistent and was 16.5 per 100,000 population in 2007. The rate was highest for African Americans males.
- The incidence of primary and secondary syphilis cases in Louisville Metro has varied over the past five years. However, males have had a consistently higher rate than females.
- African American rates for gonorrhea, chlamydia and tuberculosis continue to be much higher than the rates for Whites. However, Whites had higher pertussis rates in 2007 at local and national levels than African Americans.

Terminology

For purposes of this report, specific terms of reference were selected. For race and ethnic categories, the terms "White," "African American," and "Hispanic" are used. While "White" can be designated Caucasian, "African American" can be designated Black, and "Hispanic" can be designated as Latino, a single term was selected for each category for consistency.

White and African American refer to race categories. Other race categories, such as Asian/Pacific Islander and American Indian, are included in the analysis if appropriate. On the other hand, Hispanic refers to an ethnic category and not one race. If the analysis combines race and ethnicity, the designations become, for example, "White Hispanic" or "Non-White, Hispanic."

Data Analysis

The report uses the most current data available. The latest birth and death statistics released by the Kentucky Cabinet for Health and Family Services (CHFS) Department for Public Health at the time this report was compiled for 2006 with the death data as still preliminary. Data from 2007 and 2008 were used from other sources when available. For the Behavioral Risk Factor Surveillance System (BRFSS) survey, 2004, 2005 and 2008 data were available for Louisville Metro and comparable data for Kentucky and the U.S.

Most sections provide bar charts showing the Louisville Metro rate compared to the state and national rates, in addition to a Healthy People 2010 objective from U.S. Department of Health and Human Services where one exists.

The rates for communicable disease incidence and for chronic disease-related hospitalizations are generally presented as a crude (unadjusted) rate per 100,000 population. For example, to compute a crude rate per 100,000 population for the year 2004 for gonorrhea, the steps are:

- Divide the number of new cases of gonorrhea reported during the year 2004 by the population of the area
- Multiply that result by 100,000

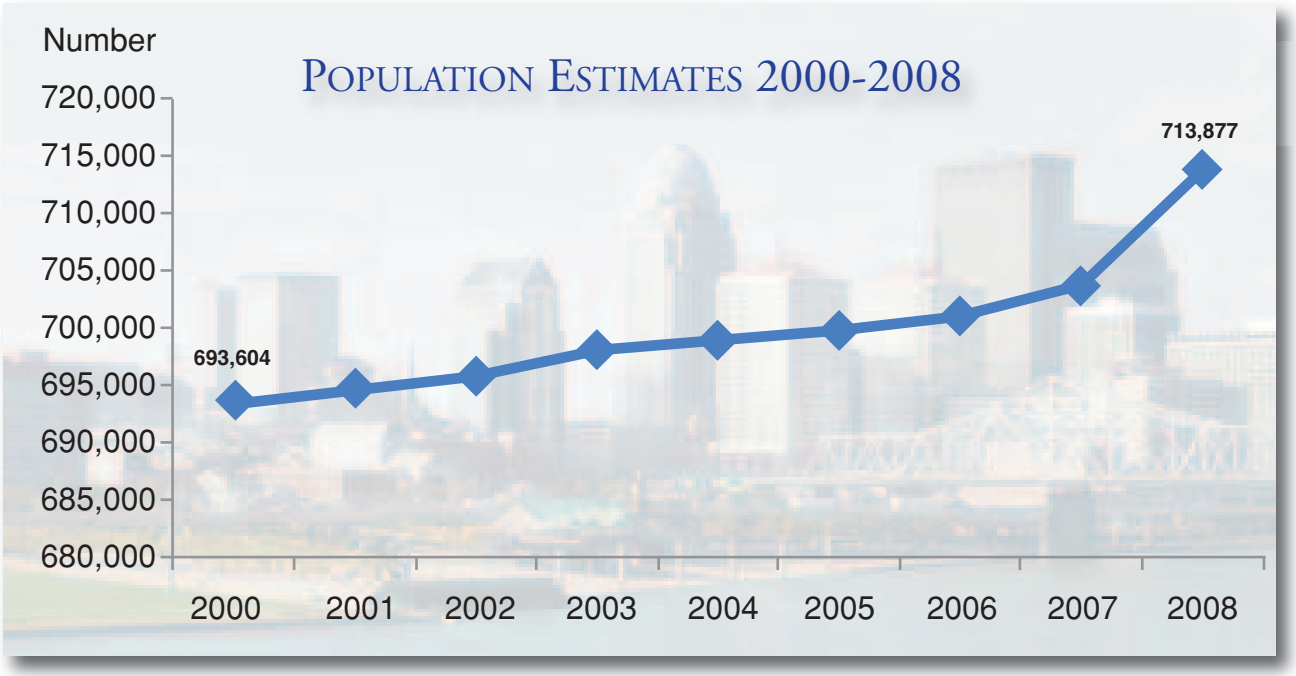
The death (mortality) rates are computed as age-adjusted rates. The age-adjusted process compensates for the differences in the age composition of the population.

- First, a crude rate is calculated for each age category.
- Then the age-specific rate is multiplied by the proportion of the standard population that particular age category represents.
- These weighted age-specific rates are added together to make an age-adjusted rate for that population.

In addition to crude rates, age-specific rates and rates based on the number of live births are used in maternal and child health analysis.

Mortality trends presented in this report reflect reported cause of death based on the ICD-10 classification. Due to a change in coding cause of death in 1998, trends for pre-1999 data are not directly comparable to those for 1999 and later data.

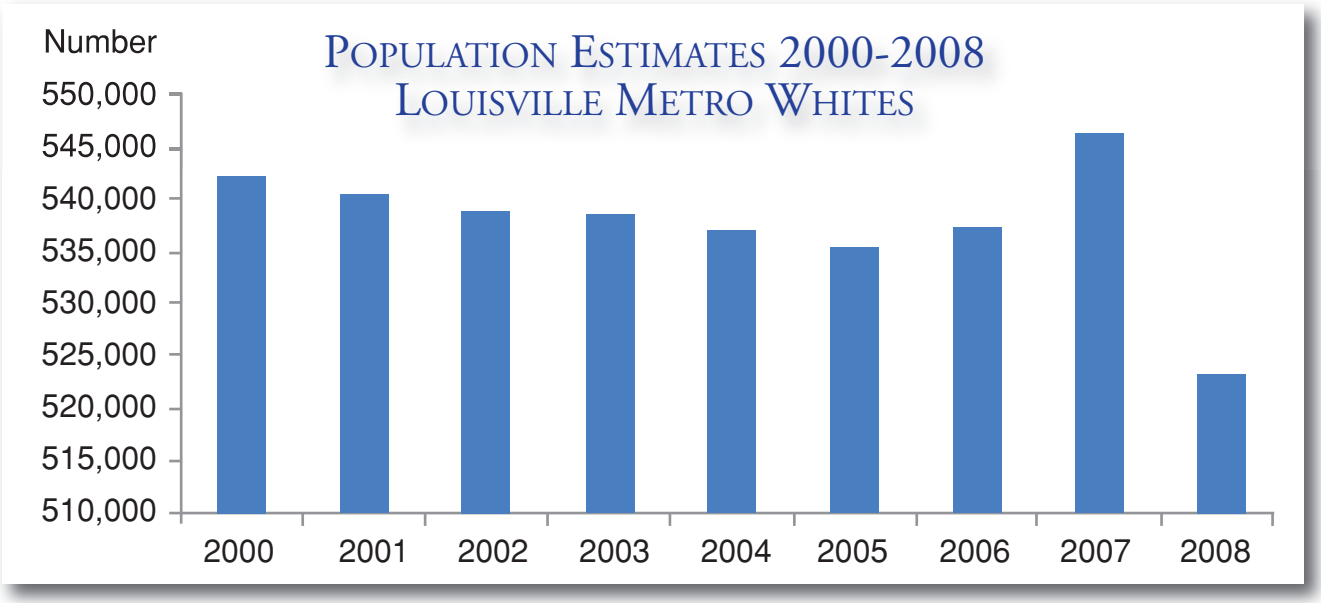
Louisville Metro Demographic and Social Profile



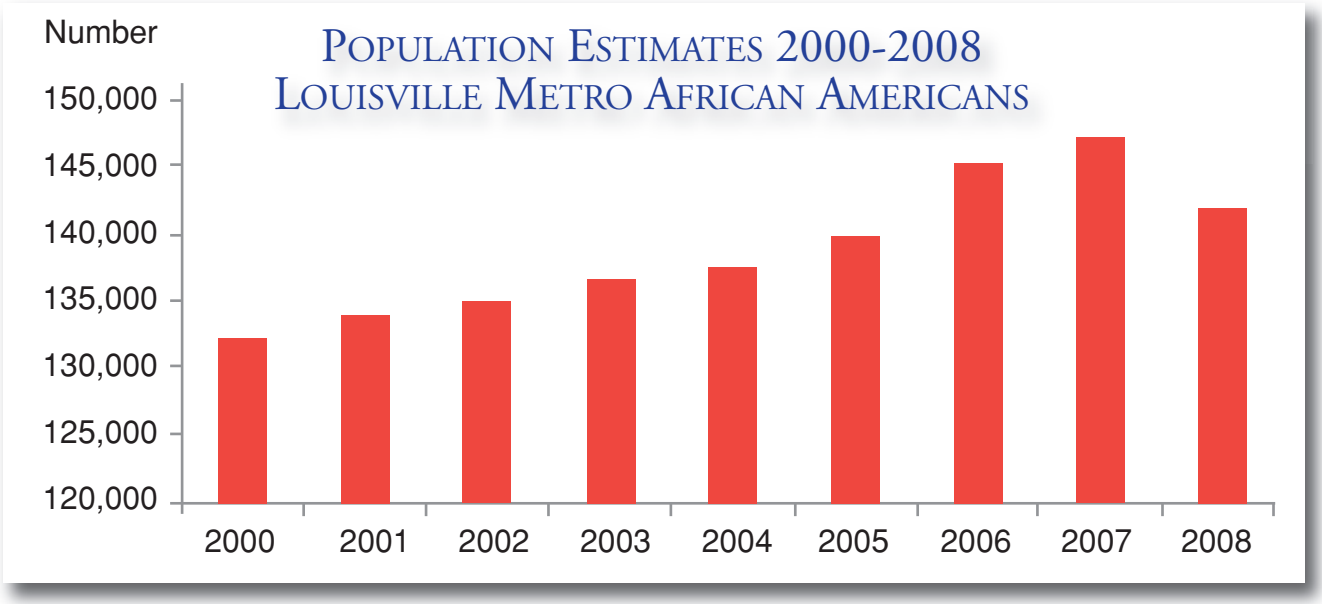
Source: U.S. Census Bureau

The U.S. Census Bureau takes a census of the population every 10 years, with the last one being completed in 2000. However, the Census Bureau's Population Estimates program publishes population estimates between censuses, with the latest for 2008. In 2000, the Bureau reported the Louisville Metro population of 693,604 and estimated a steady increase through 2008 to 713,877.[1, 2] Population estimates by race for 2008 indicate a steady increase among Louisville Metro Hispanics (22,522). Between 2000 and 2008, the population of Whites decreased by 3% (523,746), while African American populations increased by 8% (142,522) and the Hispanic population increased by 82% over the same time period.

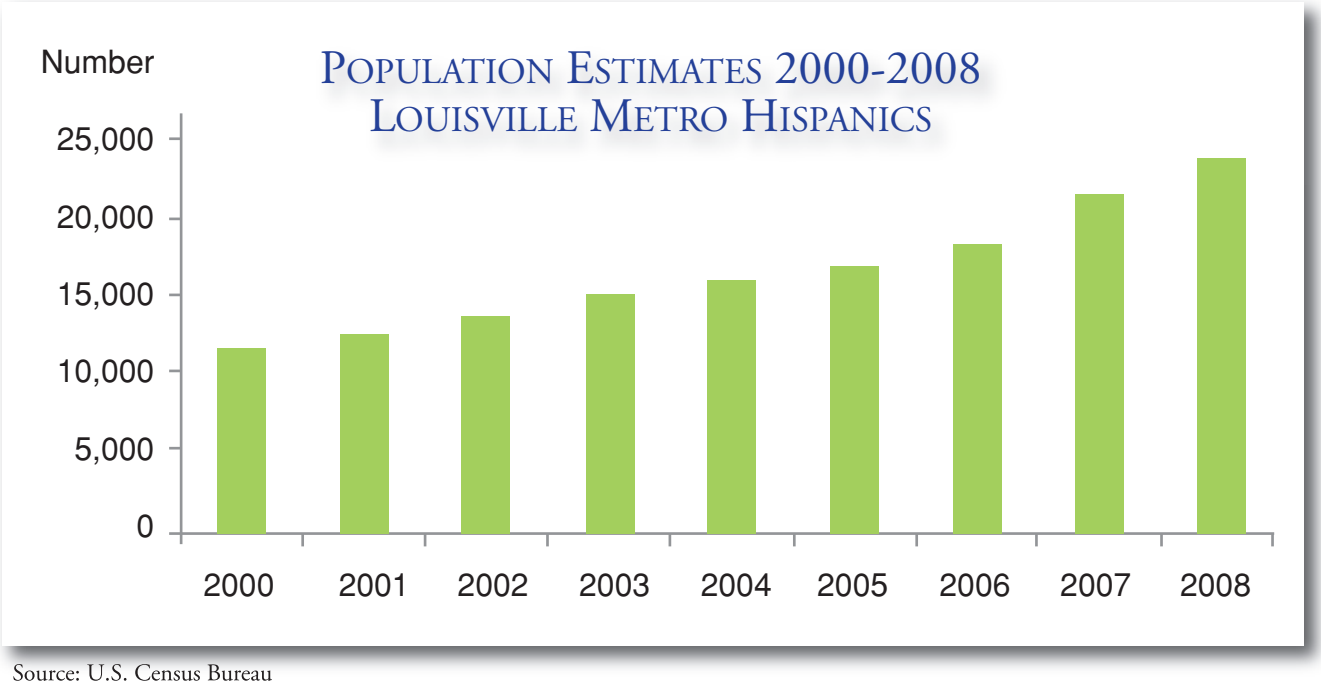
This growth rate among the Hispanic population in Louisville Metro follows national trends. According to the U.S. Census, Hispanic growth rate (24.3%) was more than three times the growth rate of the total population between 2000 and 2006 (6.1%). This demographic shift highlights the increasing need to address existing health disparities among racial and ethnic groups in the Louisville Metro area. Health disparities can mean decreased quality of life, loss of economic opportunities, higher health-care costs, and social inequity.[3] Due to language barriers, cultural differences and unfamiliarity with the U.S. health-care system, they face a higher risk for chronic disease and injury.



Source: U.S. Census Bureau



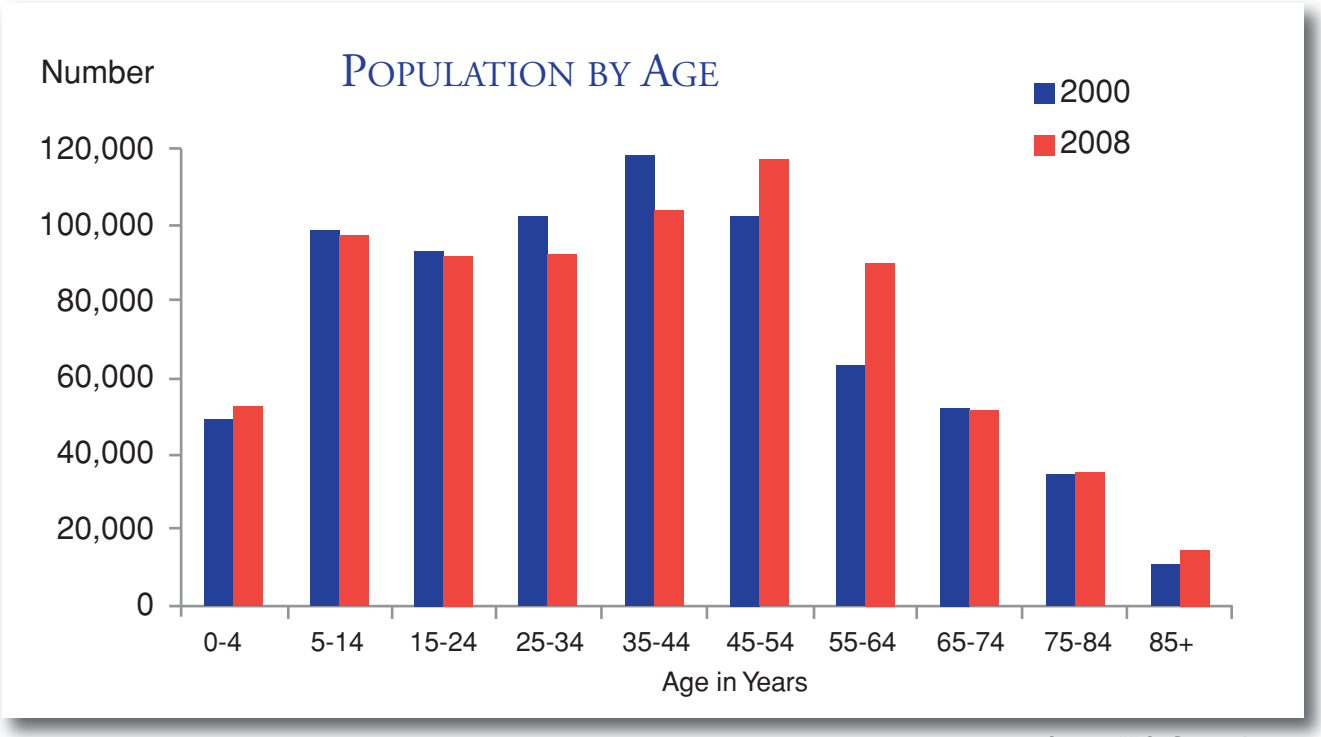
Source: U.S. Census Bureau



Source: U.S. Census Bureau

Age

The age distribution of Louisville Metro residents follows state and national trends. The largest changes between 2000 and 2008 in the Louisville Metro population were a 12% decrease in the 35 to 44 year old age group (99,415) and a 43% increase in the 55 to 64 year old age group (86,269).[2] These changes are explained largely by the aging of the 'baby boom' generation. As this group continues to age, chronic diseases and other health issues associated with an older population will require more attention.

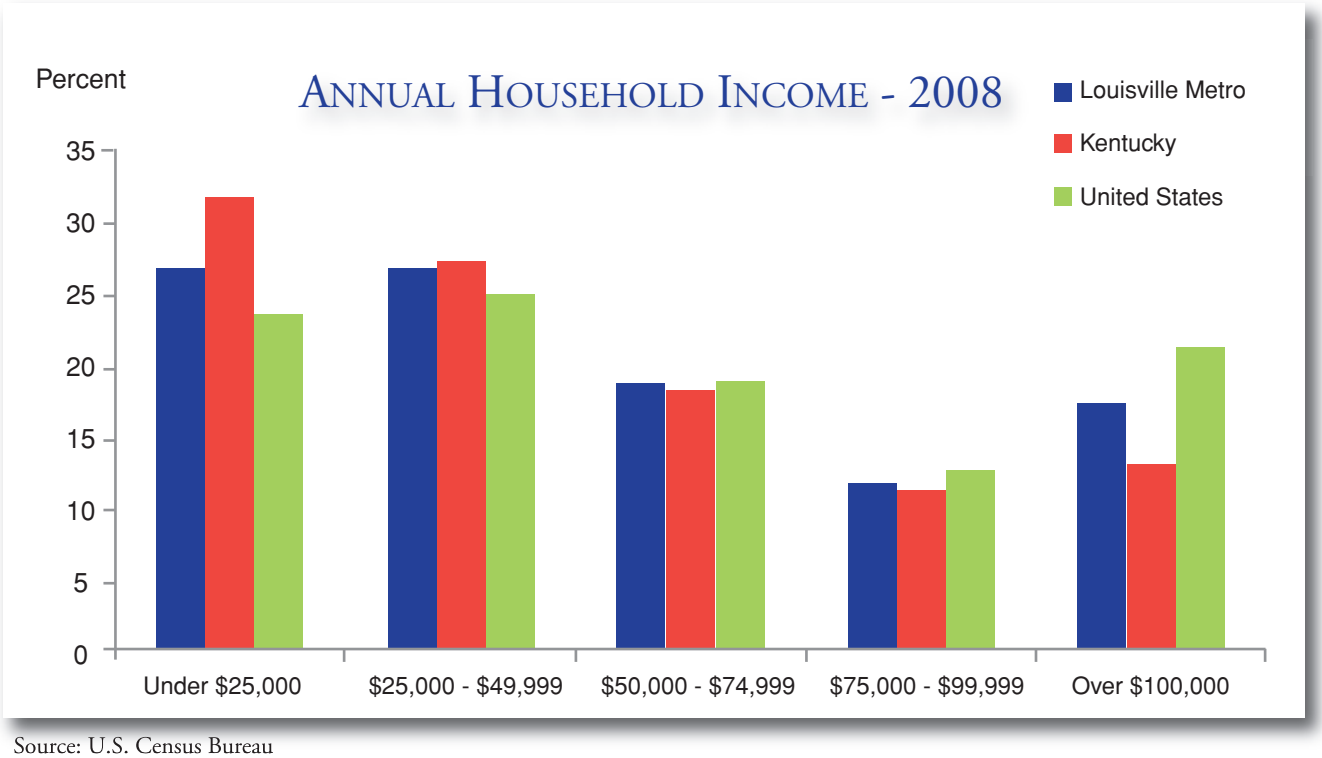


Source: U.S. Census Bureau

Economic Status

A significant amount of research has revealed that there are strong correlations between one's economic status and health. One's income, education and neighborhood environment help shape one's health throughout his or her lifetime. Families with a lower economic status are more likely to have health problems that are associated with poor housing, an inadequate diet, and a lack of access to health services. Additionally, major health problems, regardless of their cause, can inflict great financial hardship on families and dramatically alter the health status and life chances of all family members.

The median household income is often used to measure the economic health of a community. As of 2008, the median household income in Louisville Metro was $46,745, while the median income for the nation was $50,303.[2] The majority of Louisville Metro households earn under $50,000 each year. Almost a third of the Louisville Metro households have annual incomes under $25,000 while almost another third of the households earn from $25,000 to under $50,000 each year. Louisville Metro has a higher percent of households in both of these lower income categories than the nation.

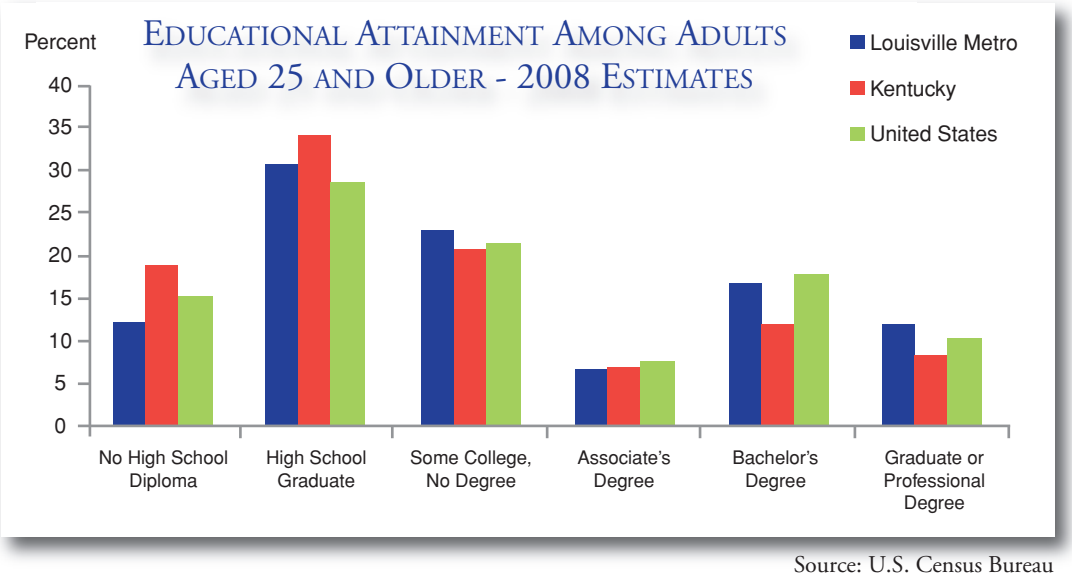


Source: U.S. Census Bureau

Federal poverty thresholds are defined by the U.S. Health and Human Services (HHS) and vary by size and composition of the household. In 2008, a family of four with two children was considered to be in poverty only if their income was less than $21,834.[3] According to 2008 census data, almost 19.4% of all Louisville Metro families with children ages 5 to 17 were living below the poverty, compared to 20.3% for Kentucky and 15% for the nation.[2]

Education

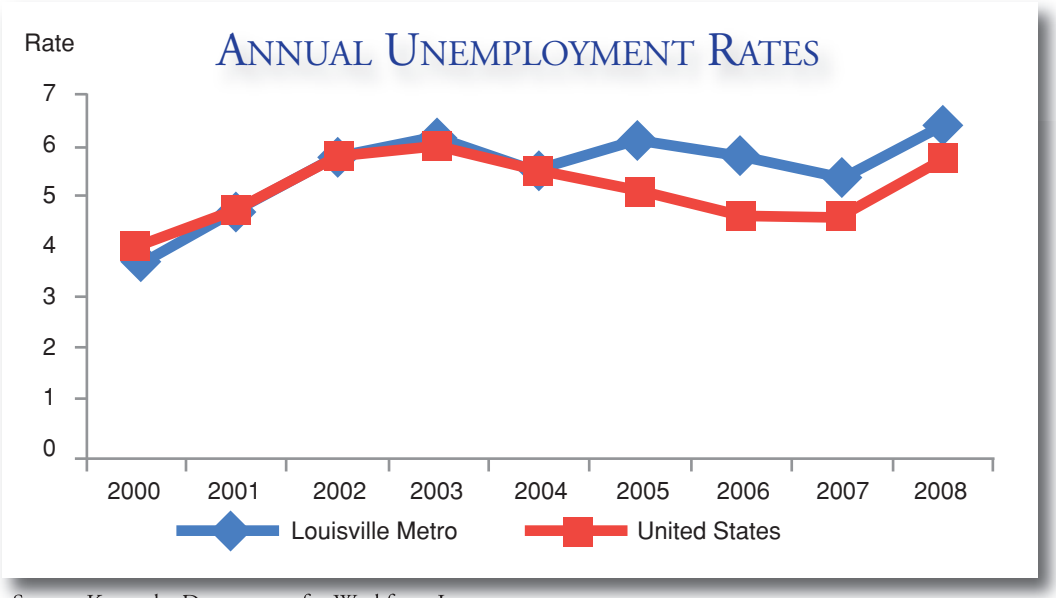
Education helps determine economic potential. The educational attainment of Louisville Metro residents is more similar to that of the United States as a whole than the Commonwealth of Kentucky. According to 2008 estimates, approximately 12% of Louisville Metro residents 25 years and older have not earned a high school diploma.[2] Nearly 43% of the residents 25 years of age and older have never attended any college.[2] An increase in educational attainment will be imperative for Louisville Metro to be able to compete economically with peer cities.[4]



Source: U.S. Census Bureau

Unemployment

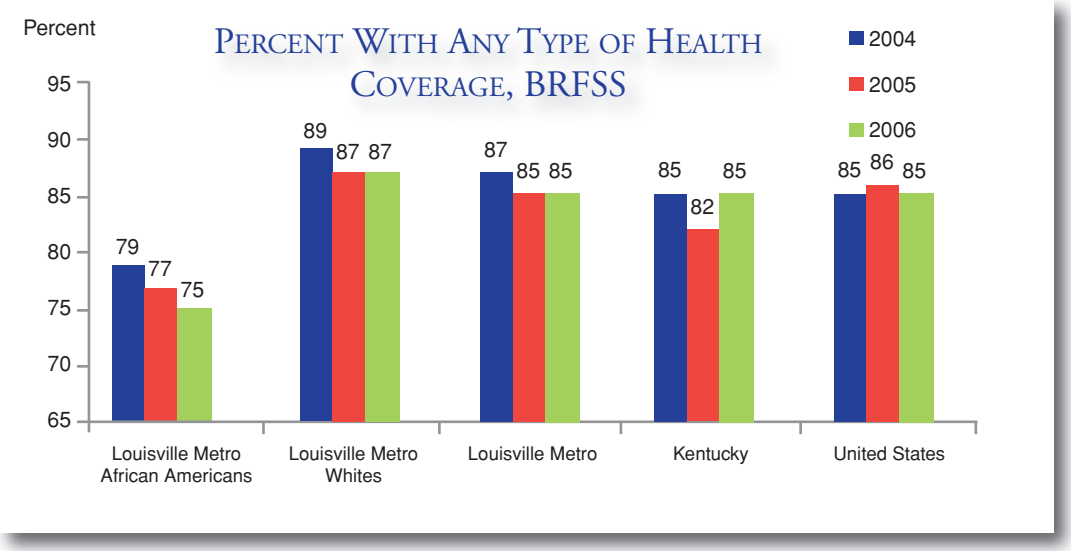
The unemployment rate is another indicator of a community's economic health. Health coverage is also often related to employment status. From 2001 through 2004, the rate for Louisville Metro was similar to the U.S. However since 2005, the unemployment rate in Louisville Metro has been higher than the rate for the U.S.[5] In 2008, the annual unemployment rate in Louisville Metro was 6.3, compared to 5.8 in the nation.[5] While the nation's unemployment rate has nearly doubled during the current economic downturn, so has that of the Louisville Metro area. As of September 2009, the unemployment rate for Louisville Metro was 10.1.[5]



Source: Kentucky Department for Workforce Investment

Health Care Coverage

The percent of the population having some type of health care coverage is another indicator of access to health care services. The Louisville Metro Department of Public Health and Wellness conducted a Behavioral Risk Factor Surveillance System (BRFSS) phone survey in 2008 to gather important health information about Louisville Metro residents. The percent of Louisville Metro residents who reported health care coverage followed state and national trends. However, the percent for Louisville Metro African Americans has decreased since 2004 with 75% reporting some type of health coverage in 2008, compared to 79% in 2004.

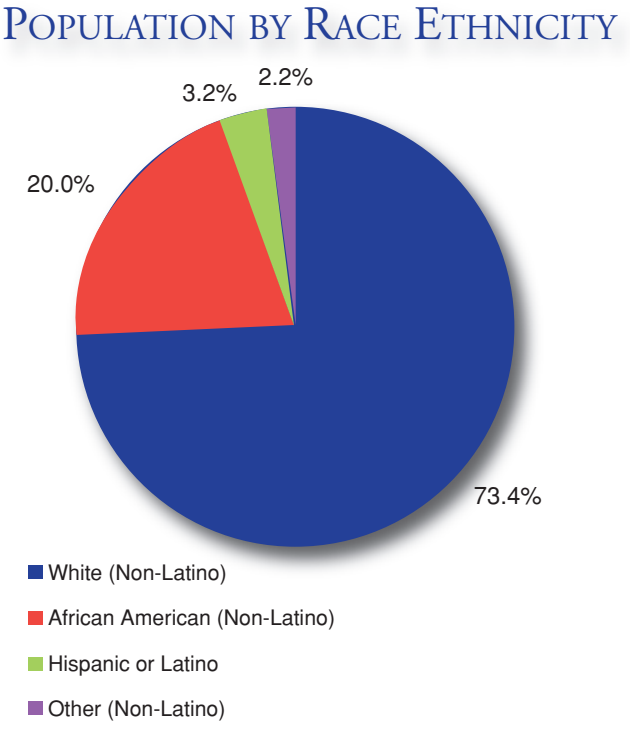


Sources: LMPHW; Kentucky Department for Public Health; Centers for Disease Control and Prevention

Race and Ethnicity

In the U.S., race and ethnicity are closely associated with economic status. Several studies have revealed a link between race and health. Because communities of color, particularly African-American and Hispanics, disproportionately suffer from higher rates of poverty, they also tend to have a disproportionately higher rate of poor health outcomes.

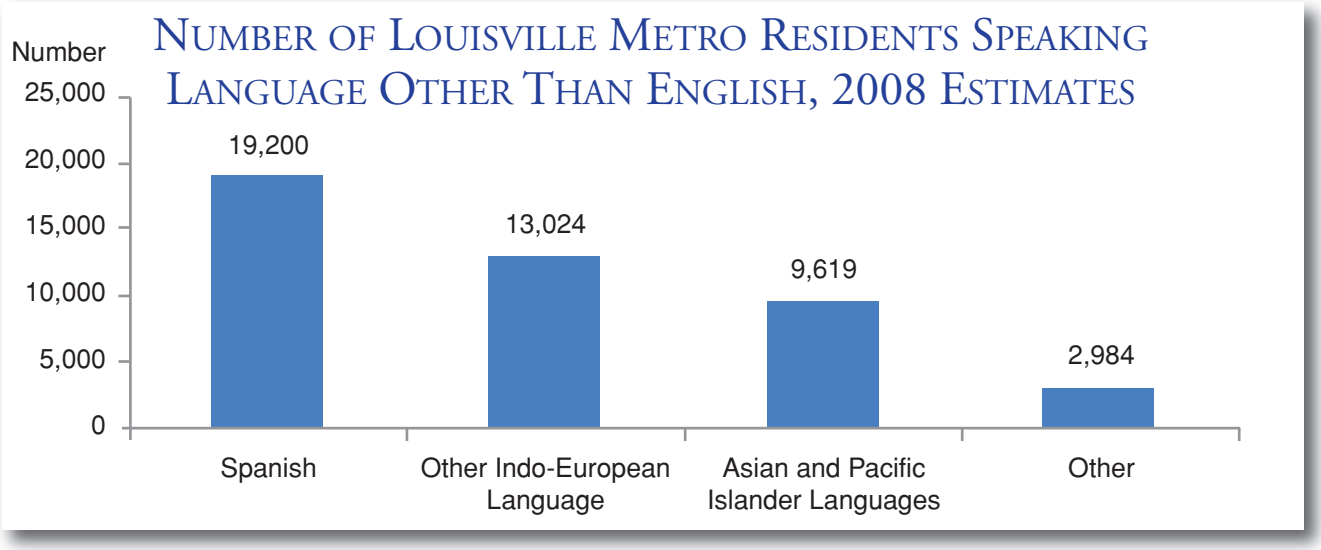
The proportion of non-White residents in Louisville Metro has continued to increase since 1990. Based on 2008 Census estimates, Louisville Metro has a non-White population of 26.6%, with the largest portion being African Americans. However, there is a growing immigrant population, many of which are young, educated and skilled workers.[7] While over 3% of Louisville Metro is of Hispanic or Latino origin, the remainder of the immigrant population (2.2%) is largely made up of groups from Africa, Asia and the Pacific.



Source: U.S. Census Bureau

Languages Spoken

The percent of residents of Louisville Metro who do not speak English well or at all was estimated to be 2.9% in 2008, an increase from 1.2% reported in 2000.[2] However, 6.8% of all residents speak a language other than English at home. Most residents who speak another language at home speak Spanish, although the Latino residents may be undercounted due to respondents with limited English proficiency and an undocumented population. Therefore, census data related to foreign-born persons, or persons of limited English proficiency should be interpreted with caution. In addition to Spanish, the next top five languages spoken by the Louisville Metro immigrant community include Korean, Vietnamese, Chinese, Arabic and Russian.[7]



Source: U.S. Census Bureau

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Maternal and *Child Health*

The health of mothers, infants, and children is a key indicator of community health as well as a predictor of the next generation's health. Featured in this section include key maternal and child health (MCH) indicators, including low birth weight, prenatal care, and births to teenagers. The health and well-being of our children depend on preventive services, such as prenatal care and immunization, as well as the promotion of healthy life choices. These measures help ensure that they are born healthy and maintain good health as they grow up.[1]

The number of live births in Louisville Metro was 10,353 in 2006. Most of these births (65.7%) occurred to White women, followed by African American women (26.1%) and those of Hispanic ethnic origin (6.7%). The largest increase of over 2% between 2005 and 2006 occurred among White women.

Birth rate is calculated as the number of births per 1,000 people. The birth rate was 14.9 live births per 1,000 people in 2006, with the highest birth rate occurring among Asian and Pacific Islander women (30.5), followed by African American women (20.6) and White women (12.7).

Approximately three-quarters of the live births (76.3%) were to women 20 to 34 years of age. Teenage females (age 15 to 19) accounted for 11.2% of the live births, while women 35 to 44 years of age accounted for 12.1%. Although birth rates to mothers aged 15 to 19 saw a decline between 1999 and 2004, rates among this group have increased since 2004 with 43.5 to 52.2 live births per 1,000 people in 2006.

Approximately 80% of mothers giving birth in 2006 received a high school degree.

Select Characteristics of Live Births to Louisville Metro Residents, 2006

Year	Births	%	Birth Rate*
1993	9,388		13.5*
1994	9,561		13.8*
1995	9,441		13.6*
1996	9,695		14.0*
1997	9,569		13.8*
1998	9,495		13.7*
1999	9,705		14.0*
2000	10,120		14.6*
2001	9,777		14.1*
2002	9,708		14.0*
2003	9,788		14.1*
2004	9,896		14.3*
2005	9,878		14.2*
2006	10,353		14.9*
Race of Mother			
White	6,807	65.7%	12.7*
Black or African American	2,697	26.1%	20.6*
Asian/Pacific Islander	302	2.9%	30.5*
American Indian	6	0.05%	3.9*
Other/Unknown	541	5.2%	**
Ethnicity of Mother			
Non-Hispanic	9,659	93.3%	
Hispanic	694	6.7%	
Age of Mother (years)			
15-19	1,169	11.2%	52.2***
20-34	7,898	76.3%	109.6***
35-44	1,254	12.1%	21.6***
Mother ≥ 12 yrs Education			
	8,248	79.7%	

Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health

* Births per 1,000 population
** Rate not calculated due to unavailability of data for denominator
*** Births per 1,000 women in that age group

Infant Mortality

What is it?

Infant mortality is the death of an infant before the date of the first birthday. The infant mortality rate (IMR) is the number of newborns dying under a year of age divided by the number of live births during the year. The IMR is reported as the number of live newborns dying under a year of age per 1,000 live births.

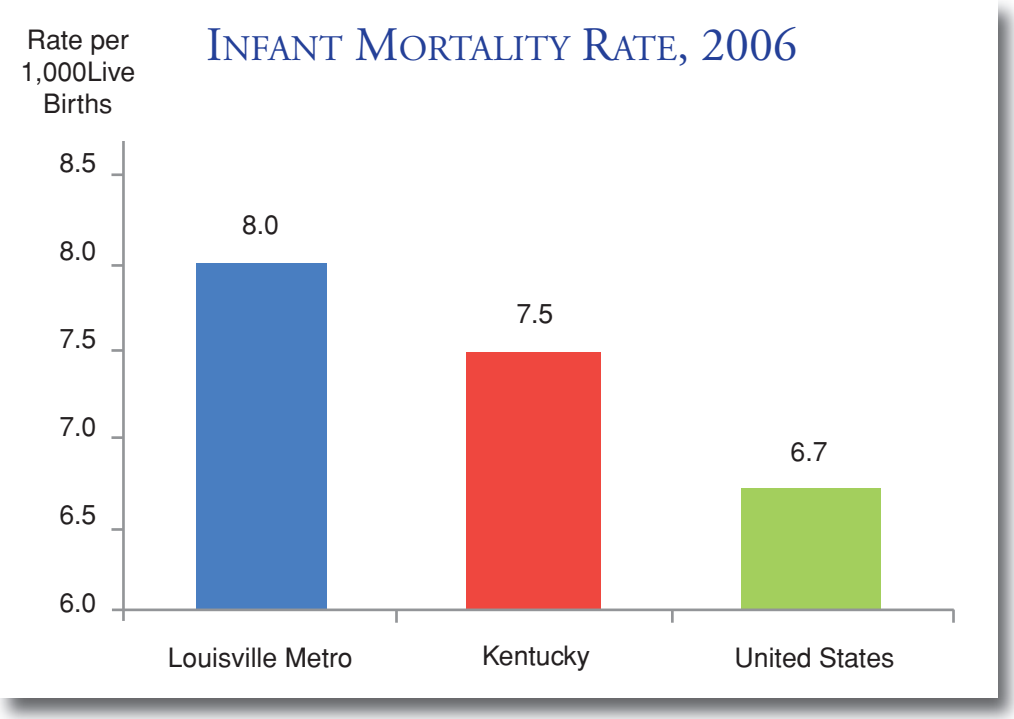
Why is it important?

Infant mortality is an important indicator of the health of a community and its mothers. There are many factors that affect infant deaths. They include the general health of a pregnant woman, their ability to access prenatal care, the care that they receive during and after delivery, care provided to the newborn, and the care the infant receives when he or she goes home.[3]

Infant mortality rates in the nation over the past several decades have substantially decreased from 29.2 in 1950 to 6.7 deaths per 1000 live births in 2006.[2] Higher rates of infant mortality are associated with the age of mother (under 17 years and over 43 years), substance abuse by mother, premature birth, low birth weight, exposure to secondhand smoke, inadequate prenatal care, infections and other complications during pregnancy.[3]

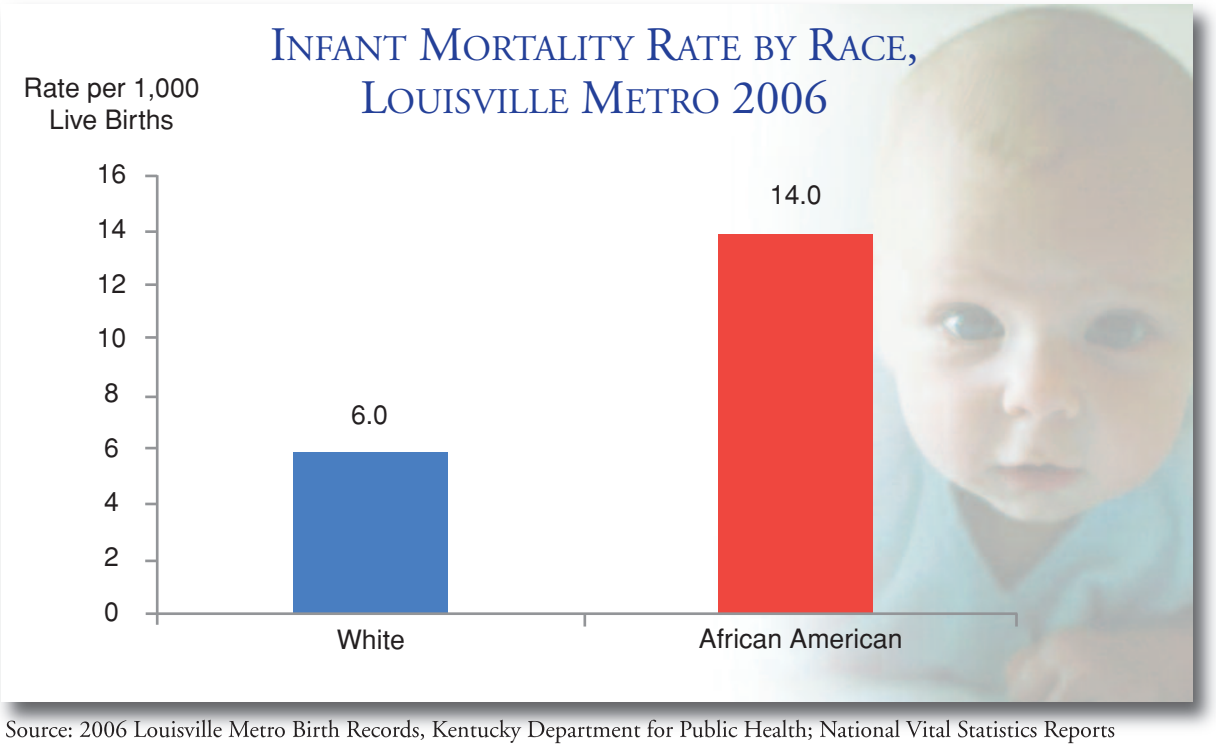
What is Louisville Metro's status?

The infant mortality rate for Louisville Metro in 2006 was 8.0 deaths per 1,000 live births. This rate was higher than the reported rate for the state (7.5), nation (6.7), and exceeds the Healthy People 2010 national goal of no more than 4.5 deaths per 1,000 live births.[2, 4]



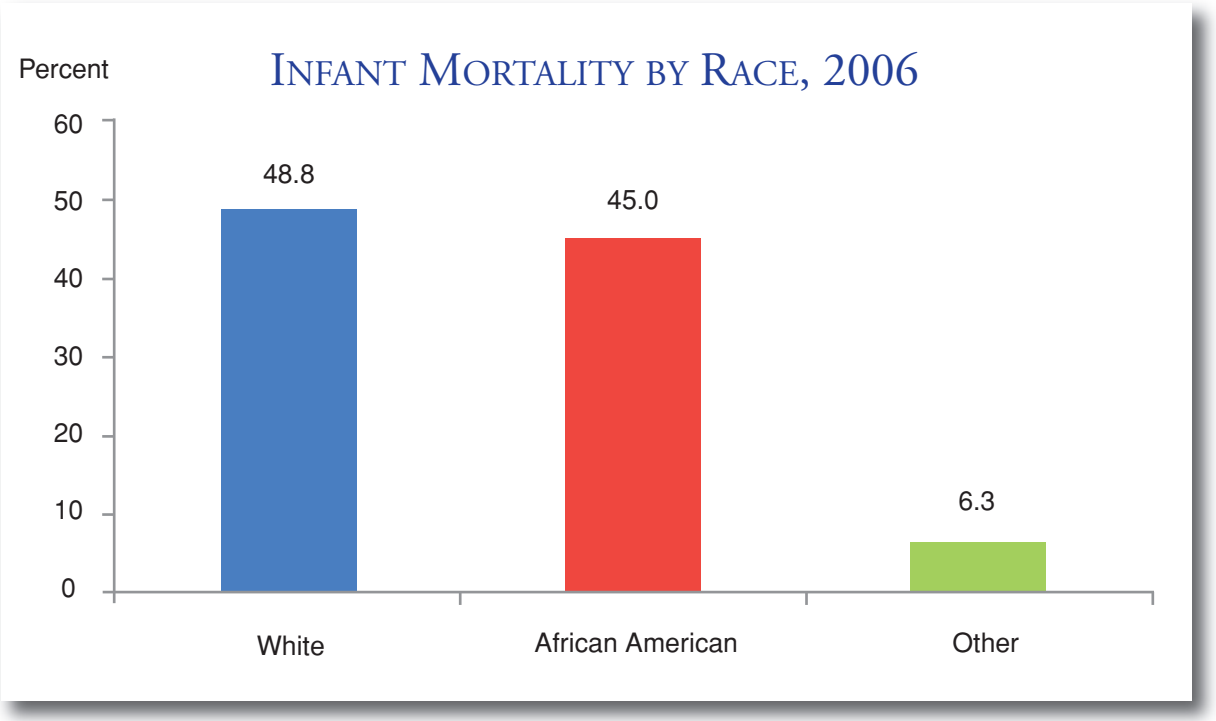
Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

The infant mortality rate among African Americans was more than twice the rate for Whites (14.0 per 1,000 live births compared to 6.0). Important determinants of racial differences in infant mortality are low birth weight (LBW) and very low birth weight (VBLW).[5]



Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

In 2006, 80 infants died before their first birthday in Louisville Metro. Of the infants who died, 48.8% were White, 45% African American, and 6.3% were of other races.



Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

Low Birth Weight

What is it?

Babies who are low birth weight (LBW) weigh less than 2500 grams (or 5.5 pounds) at birth. Very low birth weight (VLBW) babies are classified as those weighing less than 1500 grams (or 3.3 pounds).

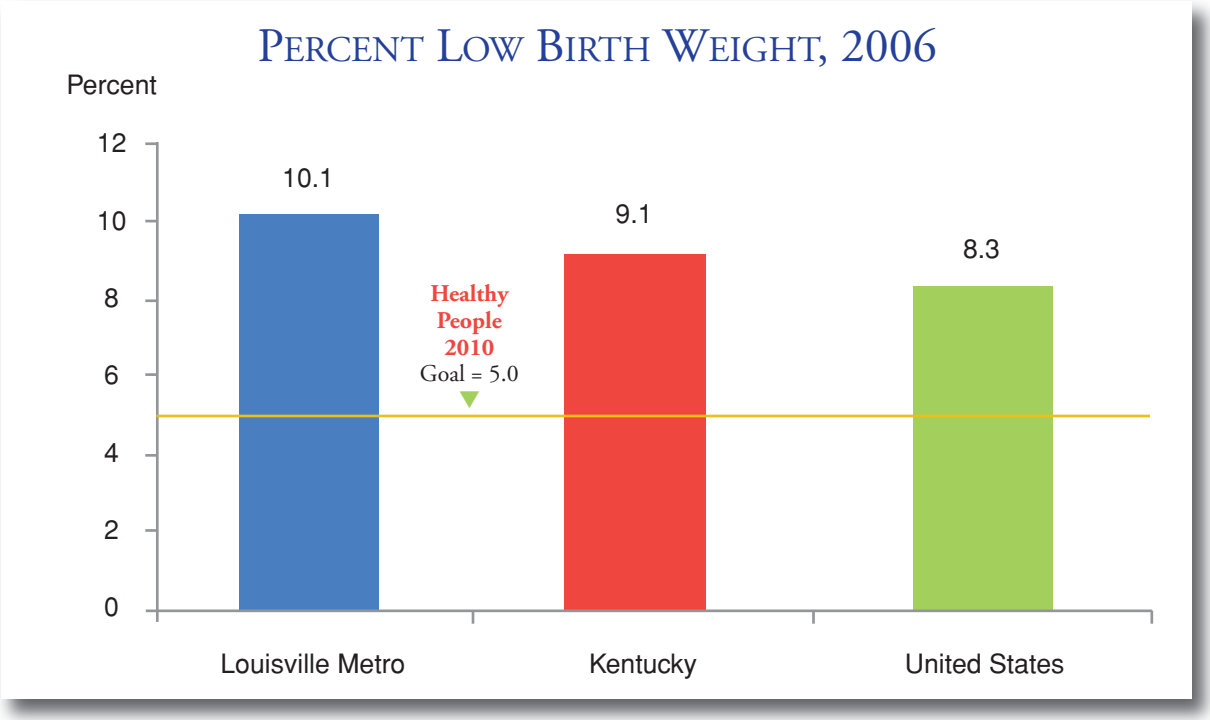
Why is it important?

Birth weight is an important indicator of infant health. Children born very low birth weight are significantly more likely to die in the first year of life than children of a healthy birth weight and those who survive face a higher risk for health complications. Low birth weight is the leading cause of infant death. As a group, LBW children experience more health problems, such as asthma, upper and lower respiratory infections, and ear infections.[6] Additionally, LBW children are at risk for lower scores on intelligence tests and for developmental delays. Therefore, achieving a healthy weight is crucial for a newborn's survival and can have a significant impact in reducing infant mortality.[1, 6]

Several social and medical factors contribute to the risk of a low birth weight infant. Most important among these are pre-term (or early) labor and delivery, pregnancy associated hypertension (high blood pressure), maternal smoking and illicit drug use, young age of mother, poverty, decreased access to care, increased stress, poor maternal nutrition and the mother's level of education.[6, 7]

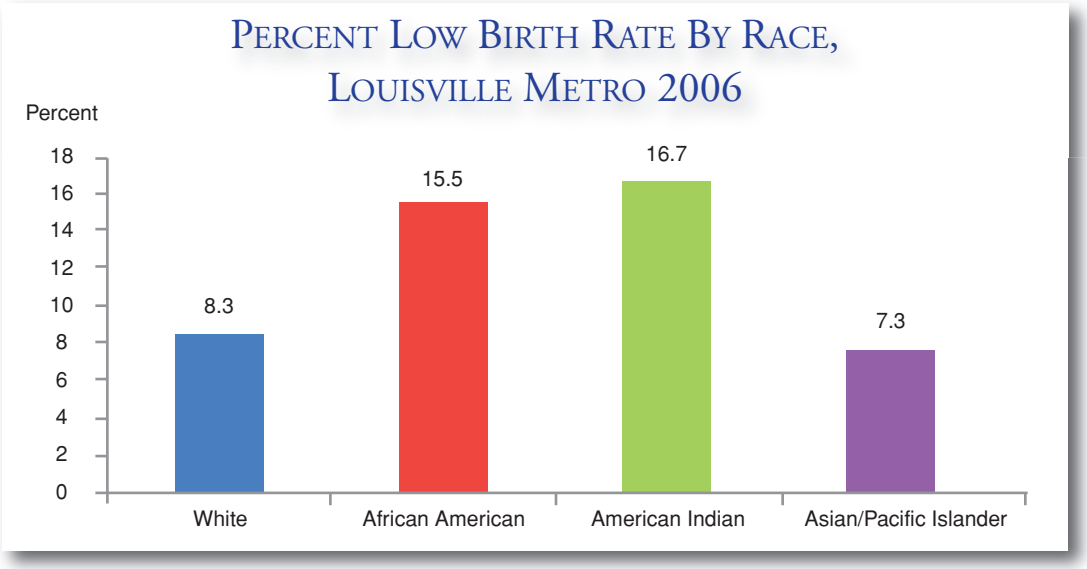
What is Louisville Metro's status?

In 2006, 10.1% (or 1049) of the 10,353 live births in Louisville Metro were classified as low birth weight and of these, 229 (or 21.9%) were very low birth weight. The percentage of low weight births in Louisville Metro (10.1%) was higher than the state rate (9.1%),[7] national rate (8.3%),[7] and twice as high as the Healthy People 2010 goal of 5%.[4]



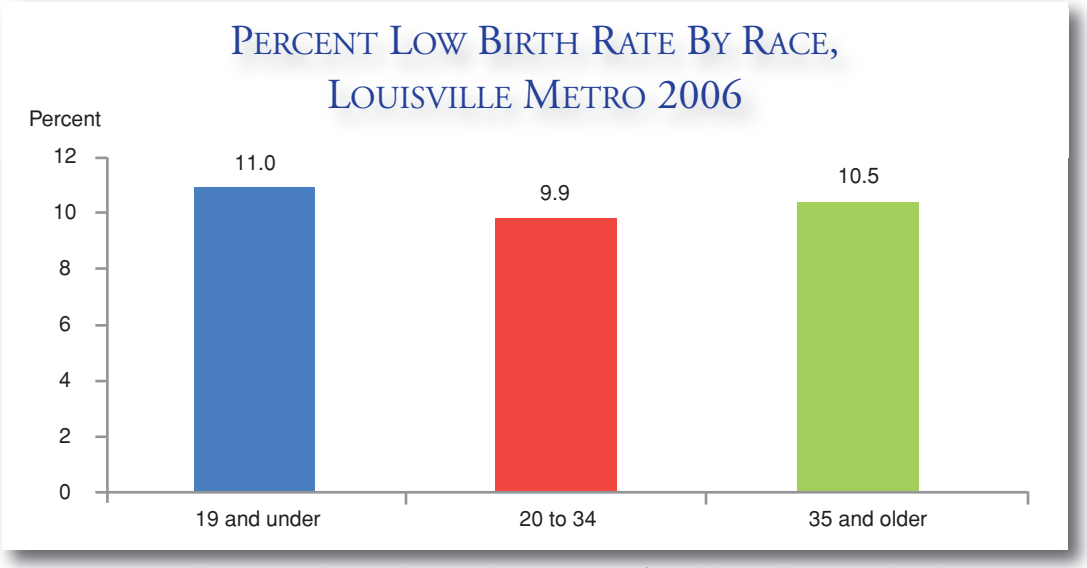
Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

The highest percentage of low birth weight babies was among American Indian mothers (16.7%), followed by African American mothers (15.5%) and White mothers (8.3%). The origin of the differences in low birth weight between White mothers and mothers of other racial and ethnic groups is complex and cannot be explained entirely by demographic risk factors such as maternal age, education, or income.[5, 8] Factors that may also contribute to this disparity include racial differences in maternal medical conditions, stress, lack of social support, previous preterm delivery and maternal health experiences that might be unique to women of color.[8]



Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

As a group, mothers 19 years of age and under continued to have the highest percentage of low birth weight births (11.0%), followed by mothers 35 years of age and older (10.5%). However, while the percentage of low birth weight births by mothers 35 years of age and older increased from the previous year in 2005 (9.7%), low birth weight births by mothers 19 years of age and under went down (13.6%).

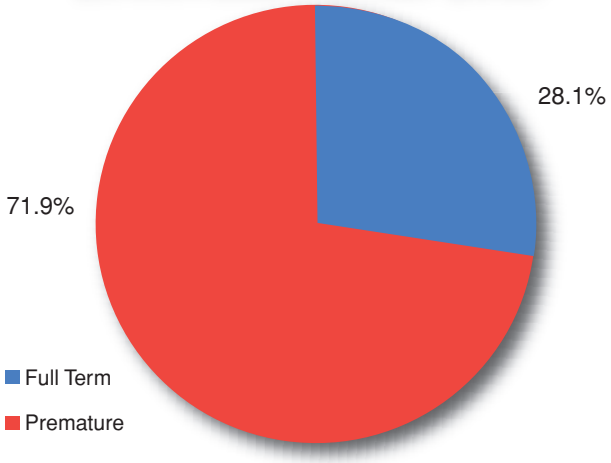


Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

There is a strong association between low birth weight and pre-term delivery. Pre-term births are the live births that occur before 37 weeks of pregnancy. Approximately 72% of the low weight births in Louisville Metro were pre-term (or premature) births. This was a 4% decrease from the previous year.

Research has shown that smoking while pregnant has a detrimental effect on the health of a baby. It nearly doubles the likelihood of a low-birth weight baby. Women who smoke anytime during the month before pregnancy to the end of the first trimester are also more likely to have a baby with birth defects. Mothers that smoke while pregnant remain a serious problem locally and throughout Kentucky. Of the 54 largest metropolitan areas of the U.S., Louisville Metro was ranked as one of the top cities for mothers that smoke while pregnant.[9] More than a quarter of the women who gave birth to a low birth weight infant reported smoking during pregnancy.

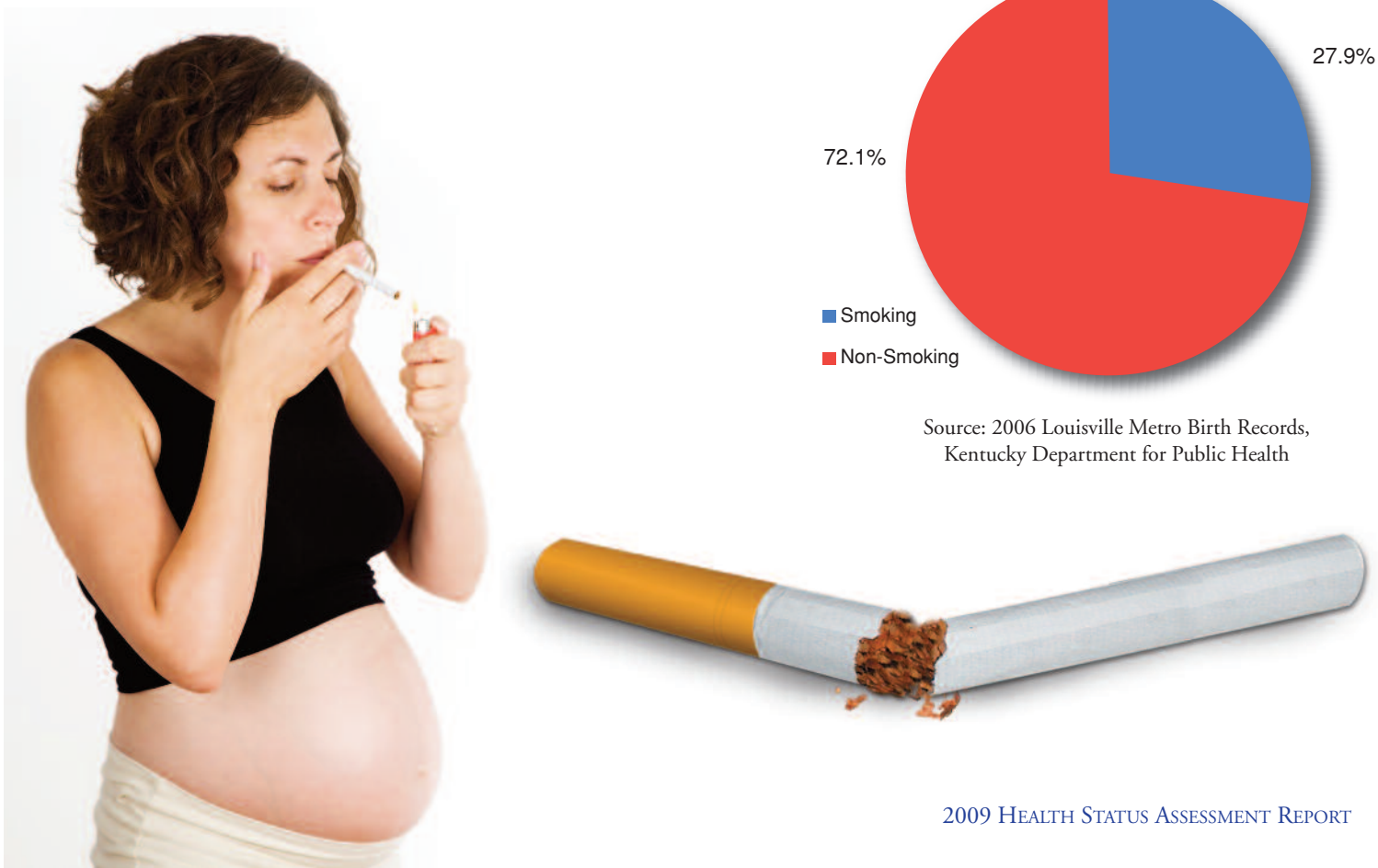
Level of Maturity at Birth for Low Birth Rate Infants, Louisville Metro 2006



Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

Smoking Status for Mothers of Low Birth Weight Infants, Louisville Metro 2006

Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health



Prenatal Care

What is it?

Prenatal care is health care and other services available to pregnant women as a fetus develops within her uterus. Adequate prenatal care is usually defined as starting care in the first three months (first trimester) of pregnancy with at least nine (9) visits for women giving birth to full-term infants (after 40 weeks of pregnancy).[10]

Why is it important?

Adequate prenatal care is important because the health care provider has the opportunity to identify and treat problems early, improving the birth outcome. The purpose of prenatal care is to decrease the number of infants born too early (pre-term birth) and too small (low birth weight), and to prevent mother and infant sickness and death. Timely prenatal care can help in the identification of risk factors such as hypertension, diabetes, and sexually transmitted diseases that may endanger the mother and fetus.

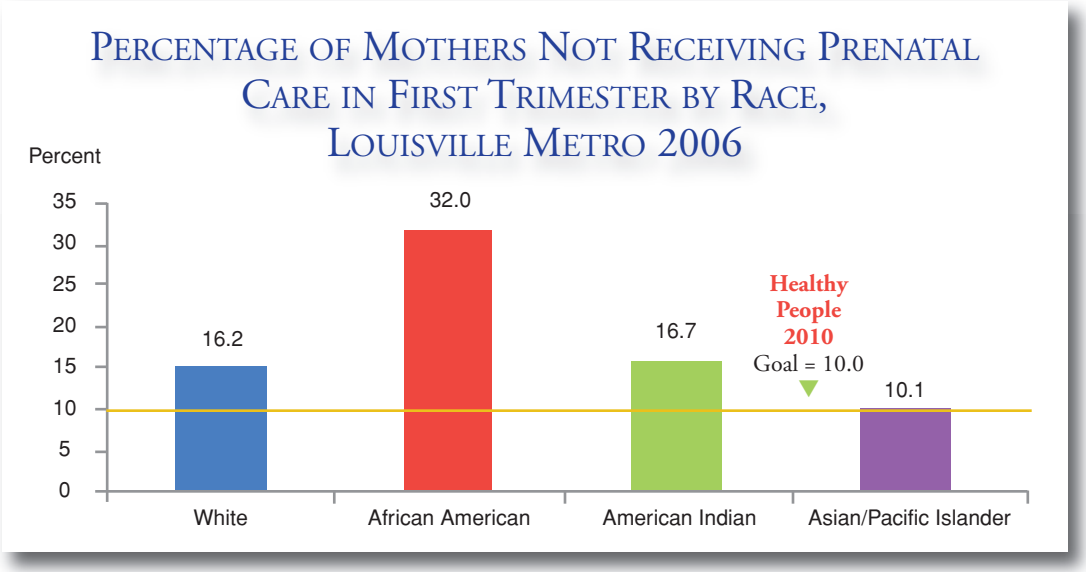
Getting early and regular prenatal care is one of the best ways to promote a healthy pregnancy. Prenatal care often provides an opportunity for education and counseling about how to handle different aspects of pregnancy, nutrition, physical activity, what to expect from the birth and basic skills for caring for the infant. [11]

What is Louisville Metro's status?

The 2003 revision of the birth certificate introduced substantive changes to information on the timing of prenatal care. Prenatal care data based on the revised certificate show a less favorable picture of prenatal care utilization in the U.S. than data from the unrevised certificate. This can mostly be attributed to changes in reporting and not to changes in prenatal care utilization. Kentucky is one of 18 states that have adopted the revised birth certificate form. Therefore, national rates will not be used for comparison.[7]

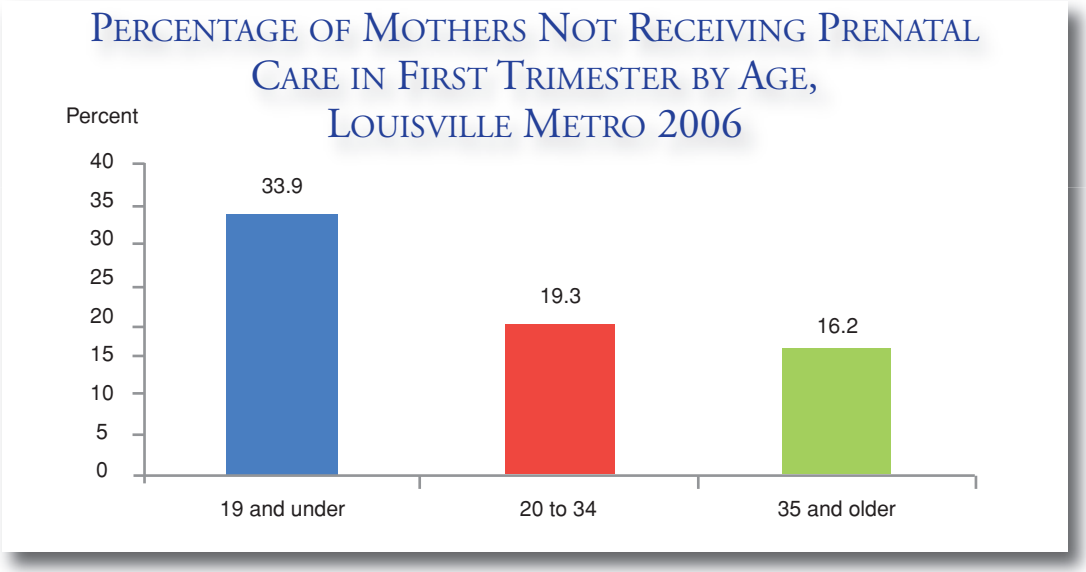
Similar to 2005, approximately 20% of Louisville Metro women who gave birth did not receive prenatal care during the first trimester in 2006. This rate was lower than Kentucky's percentage of 26.8% of all women not receiving prenatal care during the first trimester in the same year.[7] However, both percentages exceed the Healthy People 2010 goal of not more than 10% failing to receive prenatal care in the first trimester.[4]

In 2006, nearly one-third of the African American women (32.0%) did not receive prenatal care in the first trimester, followed by American Indians (16.7%), Whites (16.2%), and Asian/Pacific Islanders (10.1%). All of these rates exceed the Healthy People 2010 goal.[4]



Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health

Teenagers, 19 years of age or younger, were the least likely to receive prenatal care during the first trimester, with 33.9% not receiving such care. Women 35 years of age and older were most likely to receive timely prenatal care, with 16.2% not receiving care during the first trimester.



Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health

Birth to Teens

What is it?

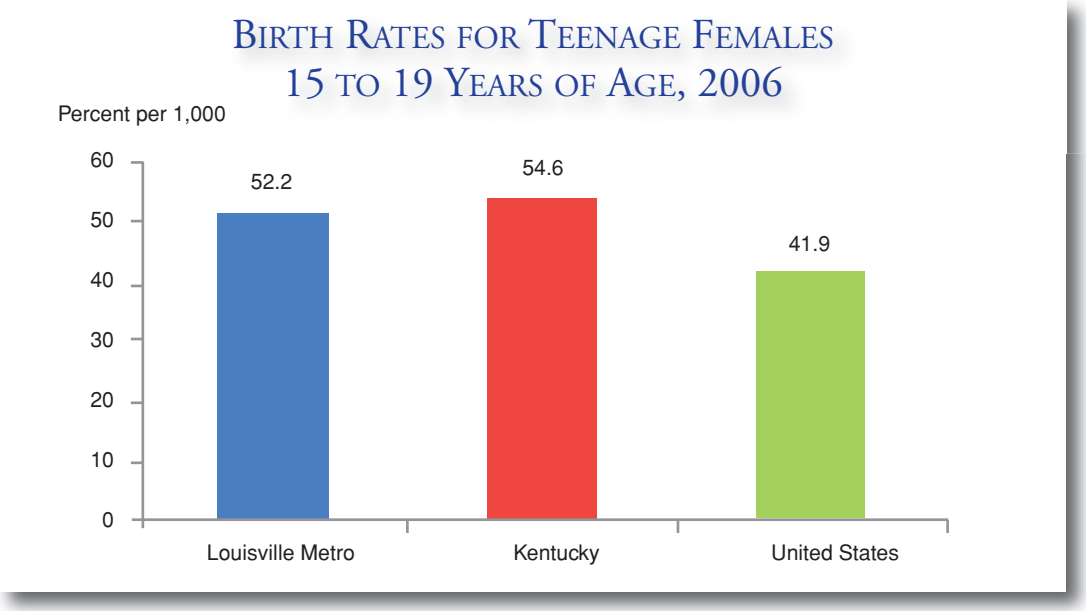
The teen birth rate is defined as the number of live births per 1,000 women 15 to 19 years of age. It is important to note that teen pregnancy rates differ from teen birth rates, representing the number of live births, induced abortions, and fetal deaths combined.[12]

Why is it important?

High teen birth rates are an important concern for a community because teen mothers and their babies face increased health risks and diminished opportunities to build a future. Babies born to teenage mothers face a higher risk for premature birth, low birth weight, other serious health issues, developmental problems and death. Babies of teenage mothers are more likely to die in the first year of life than babies of women in their twenties and thirties.[13] In addition to poor health outcomes, teen births also bring substantial social and economic costs through immediate and long-term impacts on teen parents and their children. Teen mothers are less likely to finish high school and more likely to face financial hardships than those giving birth for the first time at later ages. Children born to teen mothers are more likely to be poor as children and adults.

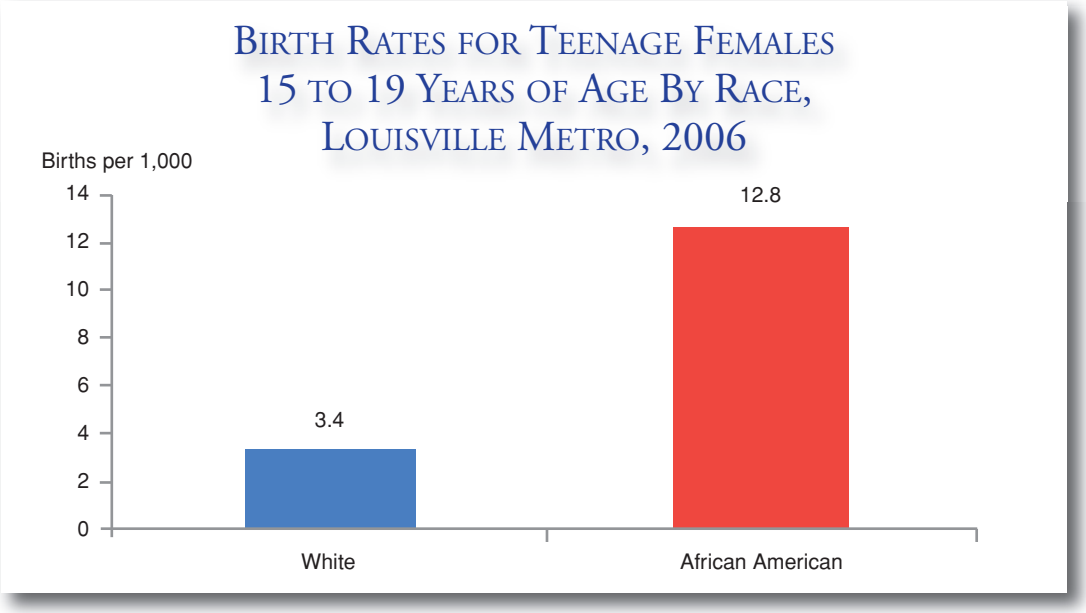
What is Louisville Metro's status?

In 2006, the birth rate for teenage females age 15 to 19 in Louisville Metro (52.2 births per 1,000 births) was lower than the state's rate (54.6), but higher than the nation's rate of 41.9.[7] The Louisville Metro rate had also increased from 2005 (44.4).



Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health; National Vital Statistics Reports

African American females 15 to 19 years of age had a teen birth rate three times higher than that of White females (12.8 per 1,000 births compared to 3.4). In 2006, there were 435,436 births to mothers aged 15–19 years in the United States, a birth rate of 41.9 per 1,000 women in this age group.[7] While the birth rate among African American teens remain disproportionately high, the U.S. rate steadily declined by 46% between 1991 and 2006.[14]



Birth Rates for Teenage Females 15 to 19 Years of Age By Race, Louisville Metro, 2006

Source: 2006 Louisville Metro Birth Records, Kentucky Department for Public Health

What Are We Doing?

The Louisville Metro Department of Public Health and Wellness (LMPHW) has several programs that provide services for women, infants and children.

HANDS (Health Access Nurturing Developing Services) is a voluntary, intensive home visitation program designed to assist parents at critical development points during their child's first two years of life. It targets first time parents, from the prenatal period to approximately two years after delivery. The program's goal is to assist with child development, parenting skills, health services and other needed resources.

Healthy Start is a federally funded initiative that seeks to reduce infant mortality (the rate at which children die before their first birthday) in targeted areas of west Louisville. Infant mortality rates in these areas range higher than those of Louisville Metro as a whole. The main objective of this initiative is to improve health and social services care coordination for childbearing women and their families living in the project area by providing culturally competent case management services. Healthy Start aims to improve pregnancy outcomes to pregnant women by making sure that women receive adequate prenatal care and support during their pregnancy.

In collaboration with the Healthy Start Program, the **Center for Health Equity** addresses disparities in perinatal health by coordinating efforts to inform the broader community about the risks and opportunities involved in prenatal and postpartum care. As part of these efforts, CHE also leads the Policy Committee, a Healthy Start subcommittee created in 2009. The Policy Committee has two primary goals: (1) to improve the functioning and capacity of the local health system for parenting and pregnant women and their families; and (2) to recommend policy changes with the goal of implementing two significant policy-level interventions related to infant mortality and health care disparities among high-risk pregnant women and their children.

The WIC Program (The Special Supplemental Nutrition Program for Women, Infants and Children) targets low-income, nutritionally at risk pregnant women, women that are breastfeeding, non-breastfeeding postpartum women and infants and children up to their 5th birthday. The benefits of WIC include nutritious foods to supplement diets, nutrition education and counseling, and screening and referrals to other health and social services. WIC services are provided at nine LMPHW clinics.

Healthy Child Care program provides consultation and classes, by a Health Department Registered Nurses, to Child Care providers, children and parents in Louisville Metro, on health, safety and nutrition issues.

Project Link provides education, counseling, and case management to women who use alcohol and other drugs while pregnant.

Through the **Teen Pregnancy Prevention Program**, the Louisville Metro Department of Public Health and Wellness:

- Provides a grant to Louisville Metro Public schools to provide PSI (Postponing Sexual Involvement) and RTR (Reducing The Risk) curriculum to students. These curriculums assist students in making good relationship choices and healthy choices about their bodies.
- Sponsors and facilitates a teen board known as STOPP (Students Taking On Pregnancy Prevention) for high school students. This board educates peers on pregnancy prevention and healthy choices.
- Partners with the Metro Department for Human Services to provide the TYPE (Teen Youth Program of Encouragement) to area middle school students to promote abstinence and healthy decision-making.
- Partners with Planned Parenthood to provide training/stipend to youth who go out in the community and educate their peers in pregnancy prevention, healthy decision-making and disease reduction issues.
- Provides funding to the Teen Pregnancy Prevention Intervention Clinic. This clinic provides family planning and other services solely to youth in the Metro area.
- Provides resource materials including pamphlets, videos, an Empathy Belly and Baby Think It Over Dolls to help community groups and individuals make informed choices about their health.
- Provides the Brown Bag Condom Distribution Program to the entire community through various sites. Condoms are distributed on an as needed basis to community agencies and businesses that have high, volume teen clientele.

Sudden Infant Death Syndrome remains a problem in our community. The LMPHW continues to be involved in supporting the SIDS "Back-to Sleep" campaign. In addition, we have been actively involved in the development of a "Co-Sleeping" educational awareness campaign to be piloted in Louisville Metro to promote safe sleeping habits for infants and prevent infant deaths caused due to co-sleeping.

The **Fetal and Infant Mortality Review Program** was re-instituted in 2009. The FIMR program is a community-owned, action oriented process that results in improved service systems and resources for women, infants and families.

The FIMR process includes:
Obtaining information about a fetal or infant death, using public records, and medical records; conducting an interview with the mother who has suffered the loss, if the mother agrees, thus providing information (medical and social) from the mother's prospective; presenting a summary of this case information to the Case Review team, comprised of health, social service and other community experts, who may identify a common trend (that might have impacted this fetal or infant death) and then make recommendations for community change, as appropriate; and lastly, reviewing of these recommendations by the Community Action team, a diverse group of community leaders, who develop, and then implement interventions to improve service systems and resources, in our community.

What Else Do We Need to Do?

Continued efforts to expand outreach and home visitation programs are needed to ensure positive maternal and child health outcomes for Louisville Metro. Strengthening new and existing partnerships and working to sustain our programs must also continue. With additional funding, vital programs such as HANDS could expand to provide services to non-first time parents.

Louisville Metro continues to have higher rates of pregnant mothers who smoke compared to other metropolitan cities in the nation. While there are several local and state initiatives that promote smoking cessation, an increase in evidence-based practices to address prenatal smoking is crucial in creating a healthier community.

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In 2006, the age-adjusted death rate (also called mortality rate) in the United States was 776.5 deaths per 100,000 standard population. This was a decrease of 2.8 percent from the 2005 rate and a record low historical figure.[1] The 15 leading causes of death in 2006 remained the same as the previous year and included with heart disease and cancer continuing to be the leading and second-leading causes of death.[1] In the early 1900s, health issues and deaths were mainly associated with injuries, sanitation, and communicable diseases. However, the development of vaccines and improved sanitation increased life expectancy. People living longer, diet, level of activity, and the quality and frequency of seeking preventive health services play a larger part in health status and life expectancy.

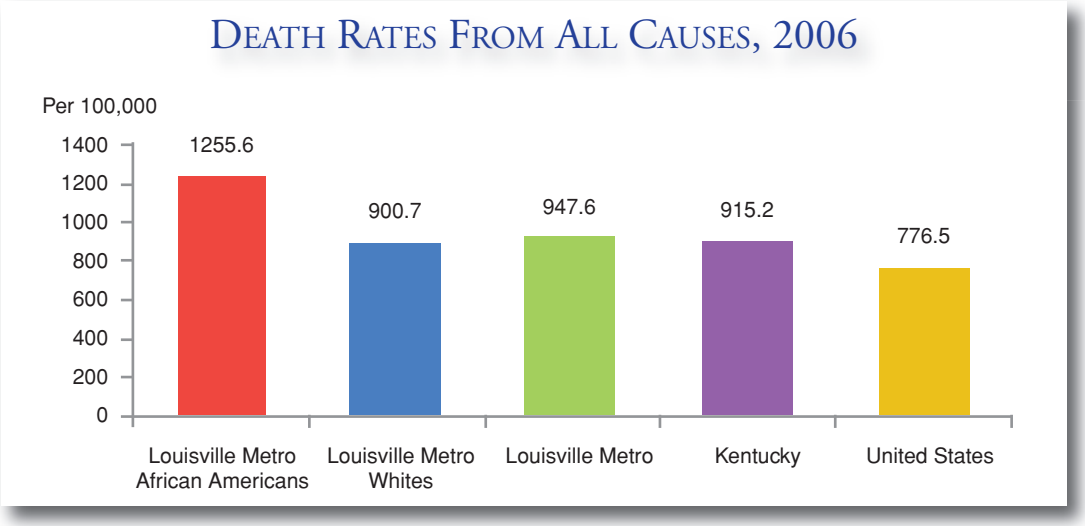
Death Rates from All Causes

Why is it important?

An examination of age-adjusted death rates is an important way to assess Louisville Metro's health status. Comparing our rate to that of the United States provides a context for understanding our death rate. Looking at differences by race and gender (health disparities) helps us identify groups who have more difficulty achieving optimal health and will assist us in meeting the health care needs of the entire community.

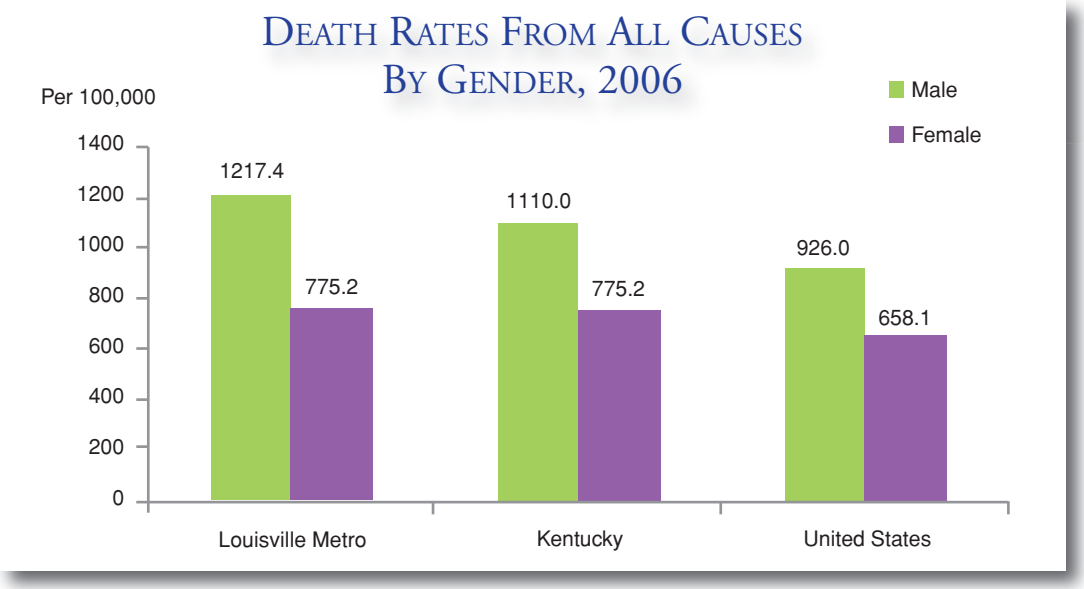
What is Louisville Metro's status?

The total number of deaths in Louisville Metro in 2006 was 6,828. The age-adjusted death rate from all causes was 947.6 per 100,000 population. This rate was higher than state (915.2) and national (776.5) rates.[1] The age-adjusted death rate from all causes for Louisville Metro African Americans was almost 40% higher than the rate for Louisville Metro Whites.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health, National Center for Health Statistics

The age-adjusted death rate for males was 57% higher than the female rate (1217.4 compared to 775.2 per 100,000 population). Louisville Metro death rates for both genders were also higher than the both the state and national death rates.[1, 2]



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health, National Center for Health Statistics

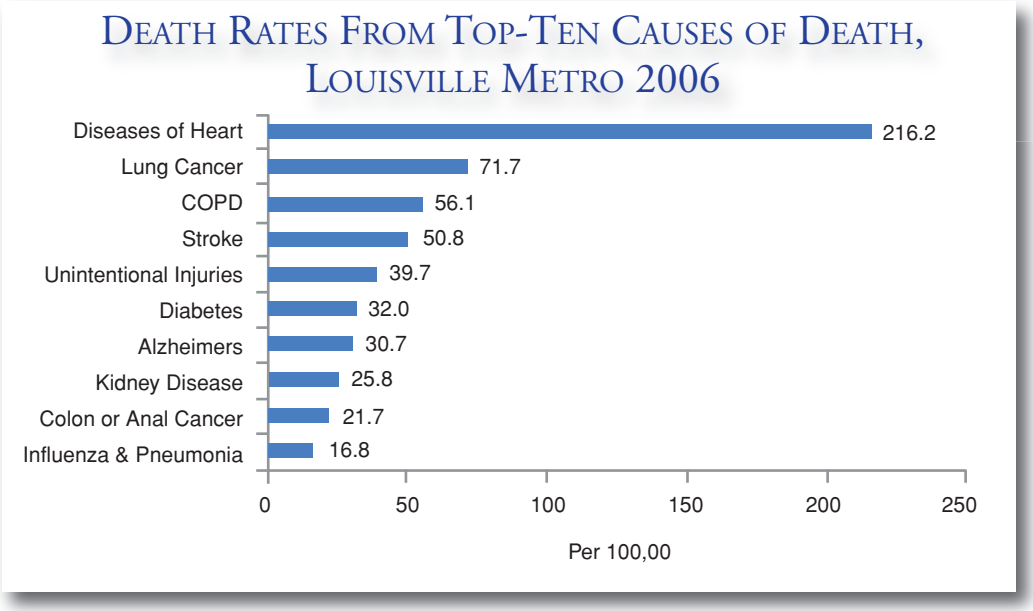
Leading Causes of Death

What are they?

Ranking the causes of death is useful for illustrating the relative burden of death from specific categories. Age-adjusted death rates for commonly used cause of death categories were computed so that comparisons could be made between Louisville Metro and other groups.

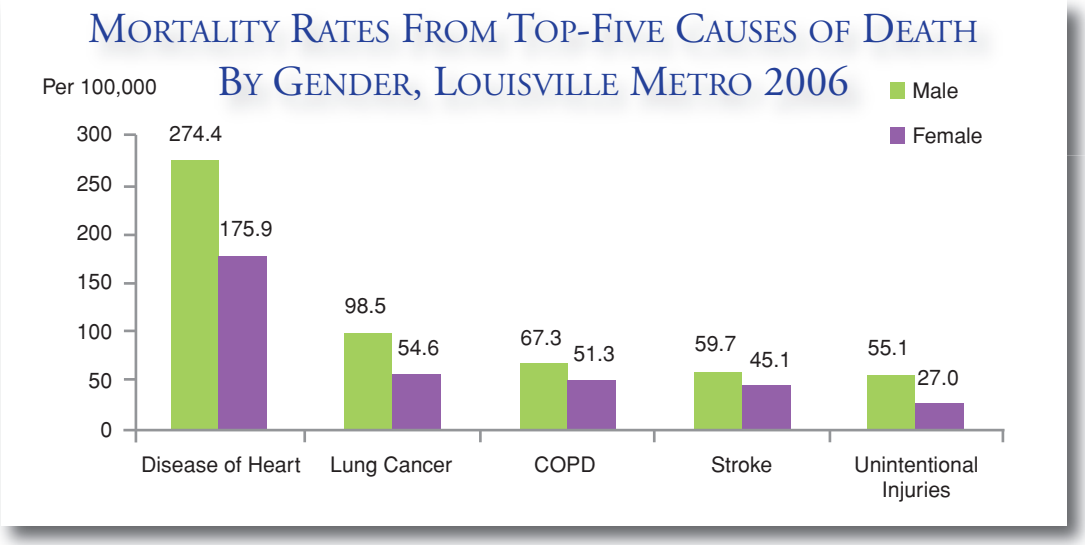
What is Louisville Metro's status?

The category of "diseases of the heart" was the number one cause of death in Louisville Metro during 2006, accounting for 23% of all deaths. The top four causes of death (diseases of the heart, lung cancer, chronic obstructive pulmonary diseases (COPD), and stroke) accounted for 42% of the deaths.



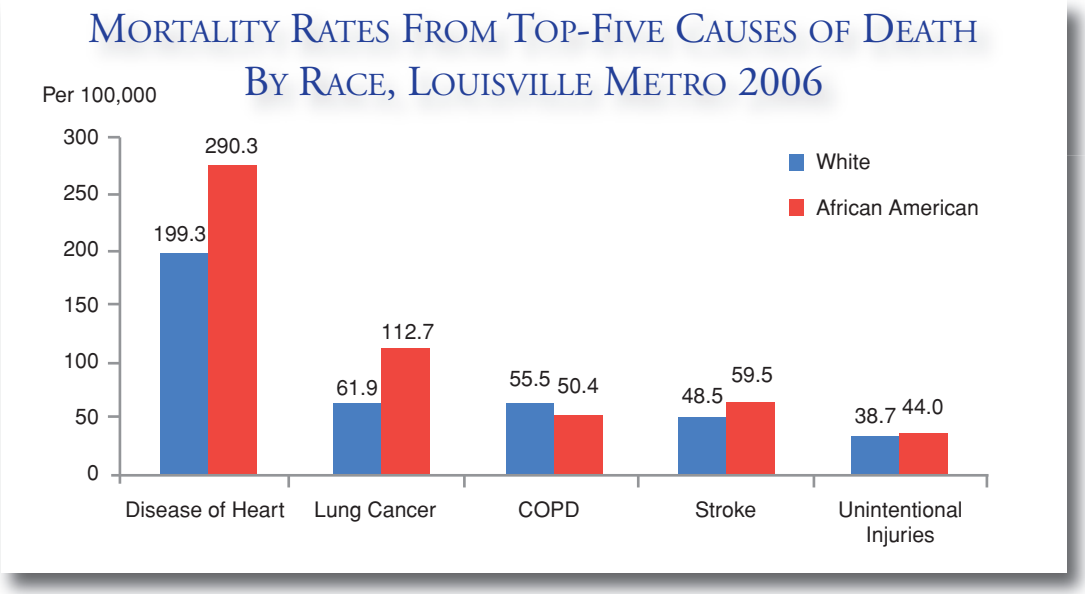
Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

Men had higher mortality rates than females for all the top five causes of death in Louisville Metro during 2006.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

Of the top five causes of death, African Americans had a higher mortality rate from heart disease, lung cancer, and stroke.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

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This section includes information on the chronic diseases that are the leading causes of death and illness in our community. Seven of every 10 Americans who die each year in the United States (more than 1.7 million people) die of a chronic disease.[1] Chronic and disabling conditions cause major limitations in activity for more than one of every 10 Americans, or 25 million people.[1] The Louisville Metro Department of Public Health and Wellness continues its preventive efforts to address chronic disease and associated risk factors.

Diseases of the Heart

What is it?

Diseases of the Heart include a variety of disorders and conditions including coronary heart disease, the most common type. Other types of diseases of the heart include hypertensive heart disease, rheumatic heart disease, arrhythmia (irregularity in your heartbeats), and cardiomyopathy (enlargement of the heart).

The word 'coronary' means crown, and is the name given to the arteries that circle the heart like a crown. The coronary arteries supply the heart muscle with oxygen and nutrients. Coronary heart disease develops when one or more of the coronary arteries that supply the blood to the heart become narrowed, impairing the blood flow to the heart muscle. This occurs due to a build up of cholesterol or other fatty substances in the blood vessels of the heart.

Why is it important?

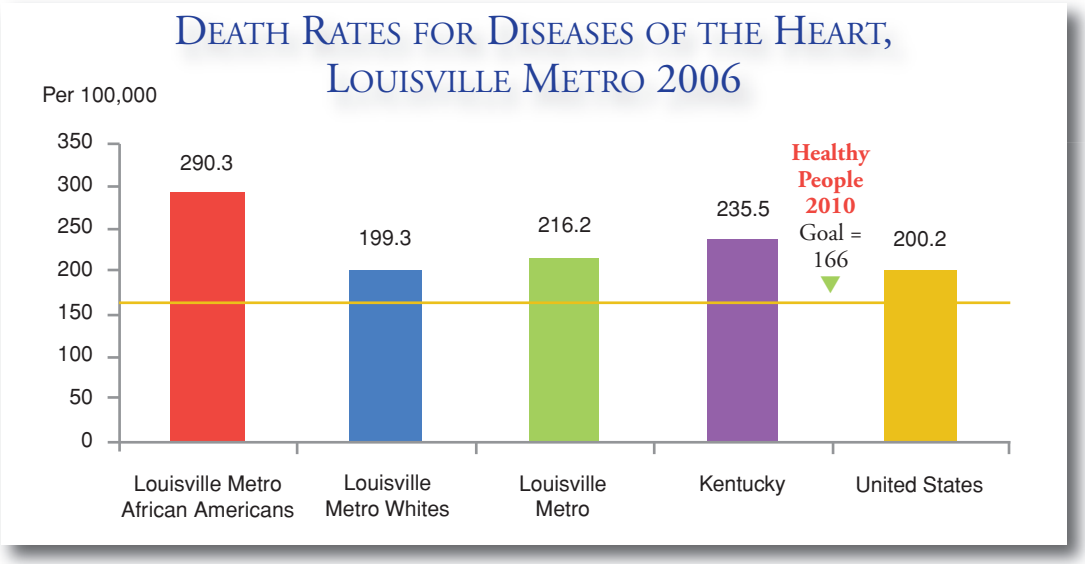
Heart disease is the nation's leading cause of death, with coronary heart disease accounting for the largest proportion. About 12 million people in the United States have coronary heart disease.[2] In general the heart disease death rate has been consistently higher in males than in females and higher among African Americans than Whites.[3] High blood cholesterol and/or triglyceride levels are a major risk factor for coronary heart disease. More than 90 million adults have higher than desirable cholesterol levels. More than 50 million U.S. adults have blood cholesterol levels that require medical advice and treatment.[4]

Being overweight is also a major risk factor for coronary heart disease. Obesity increases blood pressure, blood cholesterol levels, risk of diabetes and other conditions that directly contribute to coronary heart disease. High blood pressure is another risk factor that strains the heart and increases wear and tear on the blood vessels, making blockage more likely. Other risk factors include a smoking, high fat diet, lack of exercise and stress.

What is Louisville Metro's status?

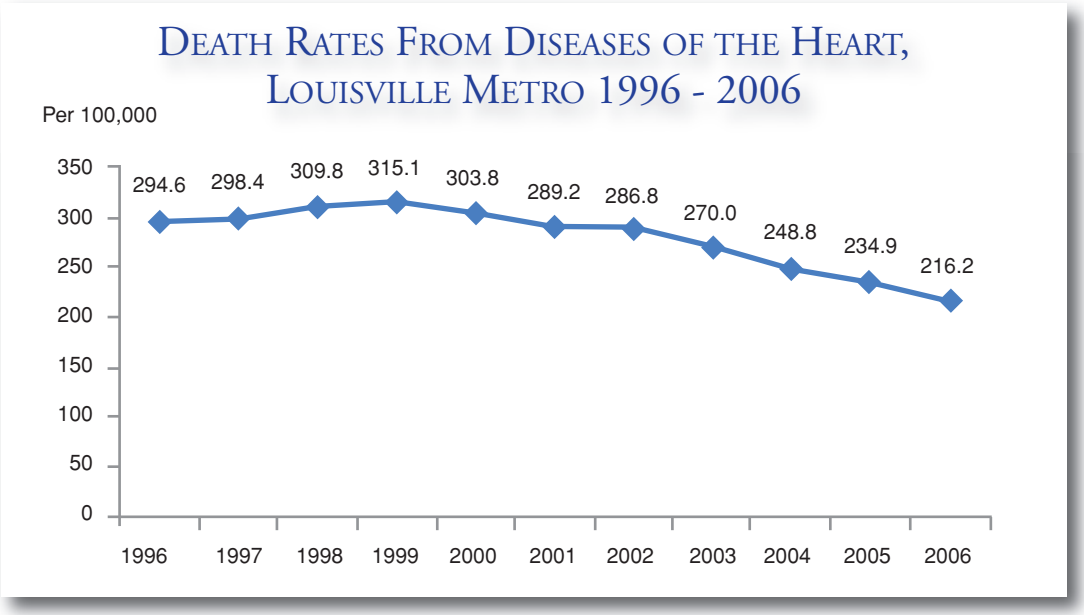
The age-adjusted rate of death for diseases of the heart in Louisville Metro (216.2 per 100,000) was lower than Kentucky's rate of 235.5.5 However, the Louisville Metro rate exceeded the Healthy People 2010 goal of no more than 166 deaths per 100,000 and the national rate of 200.2.[5, 6]

In 2006, the age-adjusted death rate for diseases of the heart among Louisville Metro African Americans (290.3 per 100,000) was higher than the rate Louisville Metro Whites (199.3 per 100,000). These numbers are similar to those exhibited in 2005 with Louisville Metro African Americans having a higher rate than Whites (291.1 compared to 234.9).



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

The age-adjusted death rate for diseases of the heart has continued to gradually decline since 1999.



Source: 2006 Louisville Metro Death Records, KENTUCKY Department for Public Health; National Center for Health Statistics

Lung Cancer

What is it?

Lung cancer is the uncontrolled growth of abnormal cells in the lung. Cells start multiplying abnormally and form a mass of cells called a tumor. As the tumor grows, it impairs the exchange of oxygen and causes tissue damage.

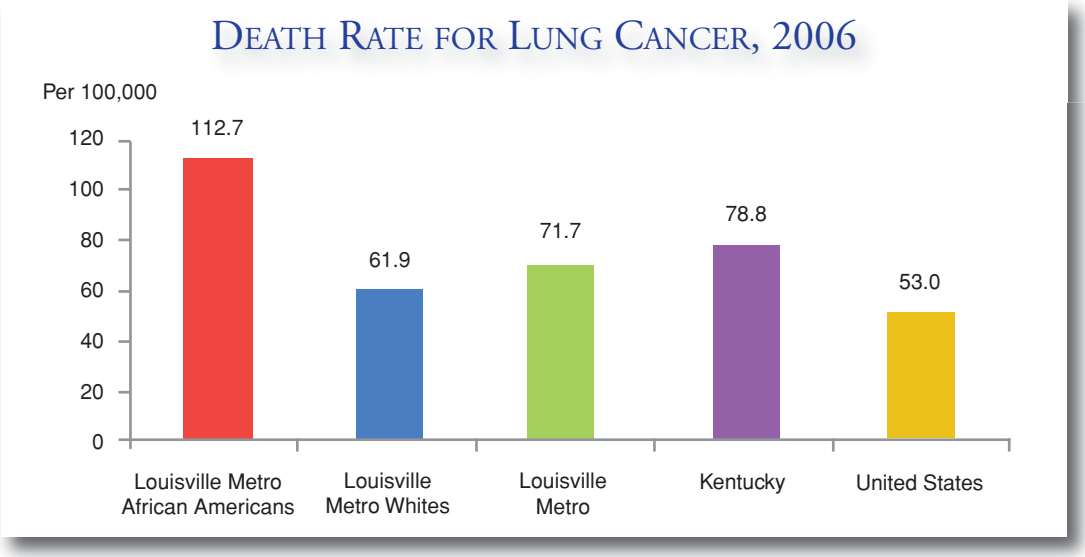
Why is it important?

Lung cancer is one of the most common cancers in the United States, with more men and women dying from it than any other type of cancer. The majority of people who get lung cancer have been cigarette smokers, but not all

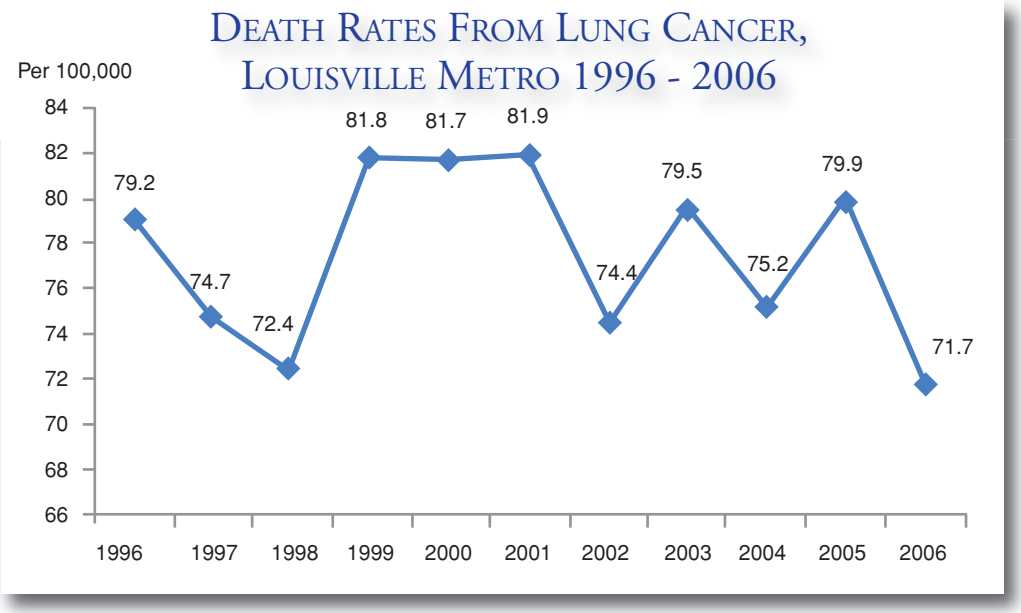
people who smoke get lung cancer. Many non-smokers also get lung cancer, as they may be in the same environment as someone who is smoking. It is estimated that 50% or more of cancer can be prevented through smoking cessation and improved dietary habits, such as reducing fat consumption and increasing fruit and vegetable consumption.[7, 8, 9]

What is Louisville Metro's status?

In 2006, the age-adjusted lung cancer death rate in Louisville Metro was 71.7 deaths per 100,000 population. This rate had been the lowest in ten years, but still higher than the national rate of 53.0 and approximately 63% higher than the Healthy People 2010 goal.[5, 6] The age-adjusted death rate from lung cancer among Louisville Metro African Americans was higher than Louisville Metro Whites.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

COPD

What is it?

Chronic obstructive pulmonary disease, or COPD, refers to a group of diseases that cause airflow blockage and breathing-related problems. It includes emphysema, chronic bronchitis, and in some cases asthma.

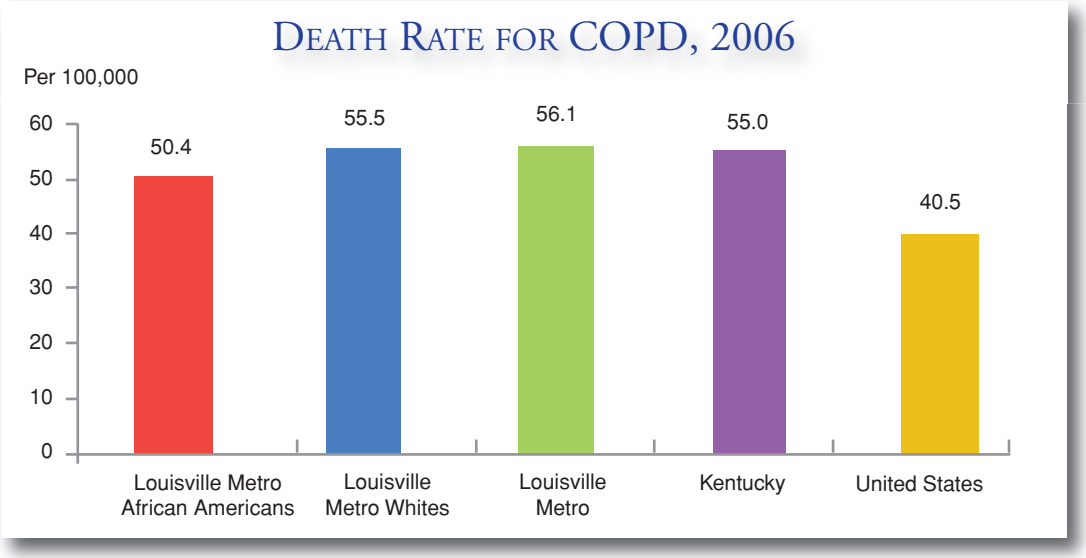
Why is it important?

COPD is a leading cause of death, illness, and disability in the United States. In the United States, an estimated 10 million adults had a diagnosis of COPD in 2000, but data from a national health survey suggest that as many as 24 million Americans are affected.[10] In the United States, tobacco use is a key factor in the development and progression of COPD, but asthma, exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role.[10]

Early detection of COPD might alter its course and progress. A simple test can be used to measure pulmonary function and detect COPD in current and former smokers aged 45 and over and anyone with respiratory problems. Avoiding tobacco smoke, home and workplace air pollutants, and respiratory infections are key to preventing the initial development of COPD.[10]

What is Louisville Metro's status?

In Louisville Metro for 2006, the age-adjusted rate of COPD deaths was 56.1 deaths per 100,000 population. The age-adjusted death rate for Whites from COPD was higher than African Americans. Local and states rates were higher than that national rate of 40.5 per 100,000 population. However, they were lower than the Healthy People 2010 goal of 60.0 per 100,000 population.[5, 6]



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

Stroke

What is it?

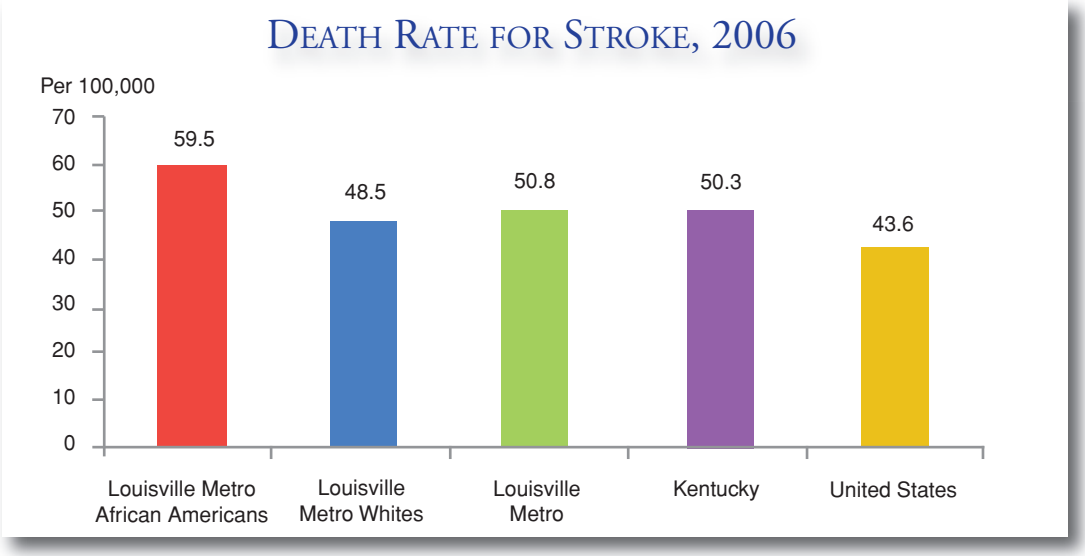
A stroke, also called a "cerebrovascular accident," results from an interruption of the blood supply to a portion of the brain. A stroke can be due to an insufficient supply of blood from a vessel getting smaller, a blood clot, or an accumulation of fat blocking the vessel. A stroke can also be caused by a vessel rupturing and resulting in bleeding into the brain. This interruption in blood flow decreases the supply of oxygen and other nutrients to the cells in that part of the brain, causing these cells to die.[11]

Why is it important?

Stroke is the third leading cause of death in the United States.[15] Depending on the part of the brain affected, damage can result in the loss of speech, vision, movement in an arm or leg, or even death. Anybody can have a stroke, but certain factors increase a person's risk including increasing age, diabetes, hypertension (elevated blood pressure), and increased fatty lipids (cholesterol and triglycerides) in the blood. Other risk factors for stroke are smoking, drinking alcohol, being overweight, lack of exercise, and poor diet.[11]

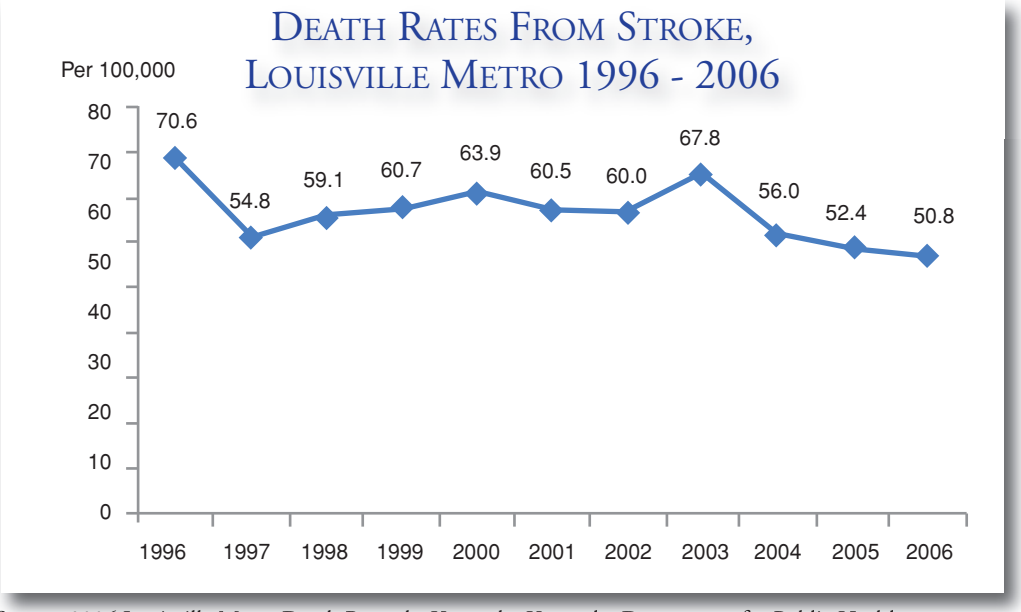
What is Louisville Metro's status?

In 2006, the age-adjusted rate of stroke death was 50.8 deaths per 100,000 population. This rate exceeded the Healthy People 2010 goal of no more than 48 deaths per 100,000 and the state and national rates of 50.3 and 43.6 deaths per 100,000 population, respectively.[5,6] Louisville Metro African Americans had a higher age-adjusted death rate from stroke (59.5 per 100,000 population) than Whites.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

The overall age-adjusted death rate from stroke in Louisville Metro has varied from 1996 to 2006. However, the rate continued to decrease since 2003 by 34% in 2006.



Source: 2006 Louisville Metro Death Records, Kentucky Kentucky Department for Public Health

Diabetes

What is it?

Diabetes mellitus is a group of diseases (type I, type II, and gestational diabetes) characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Insulin is a hormone produced by the pancreas to regulate blood sugar. Type I diabetes, often called juvenile diabetes, usually starts early in life. Type II diabetes, sometimes called adult-onset diabetes, accounts for up to 95% of all diagnosed cases of the disease. In people with type II diabetes, the pancreas either produces little or no insulin, or the body does not respond appropriately to the insulin that is produced. Gestational diabetes occurs during pregnancy.[12, 13]

Why is it important?

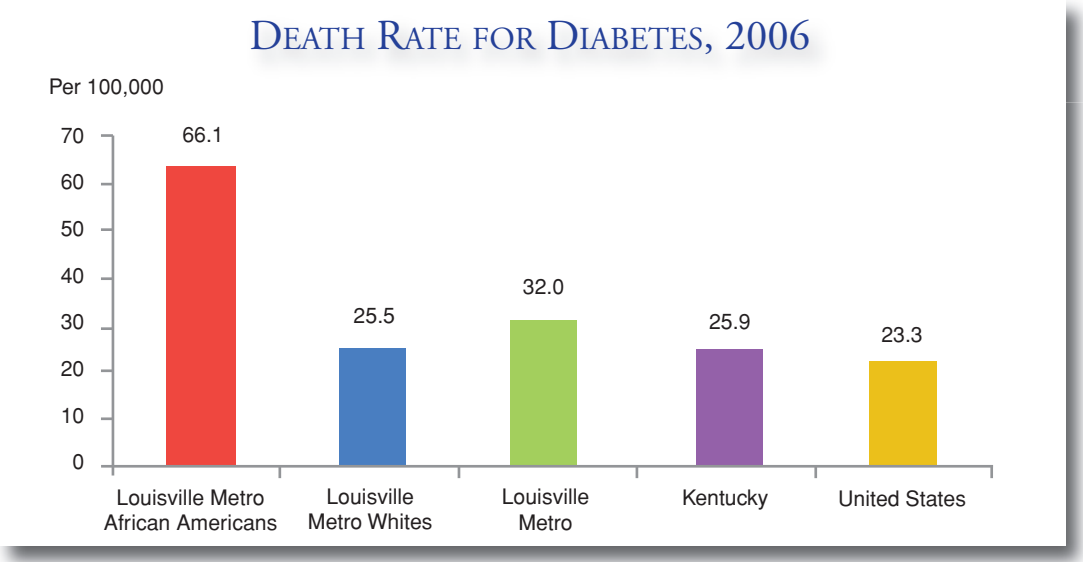
Diabetes poses a significant public health challenge for the United States. Currently nearly 2,200 new cases are being diagnosed each day totaling 800,000 cases per year.[13] Diabetes can trigger eye, heart, and kidney disease, and other life-threatening health conditions. Elderly people with diabetes are more susceptible to these complications. However keeping blood glucose, blood pressure, and cholesterol levels under control can reduce the chance of disability.[13]

Over the past decade, diabetes has remained the seventh leading cause of death in the U.S., primarily from diabetes-associated cardiovascular disease.[16] The occurrence of diabetes, especially type II diabetes, and the occurrence of associated complications are increasing. The number of persons with diabetes has steadily increased over the past decade. Estimates suggest that almost one-third of the total diabetes cases are undiagnosed.[13]

Several factors account for this increase in the incidence of diabetes. These include behavioral factors such as increased fat consumption, decreased physical activity, and obesity. Several other interrelated factors influence the present and future burden of diabetes, including cultural and community traditions and socioeconomic status.

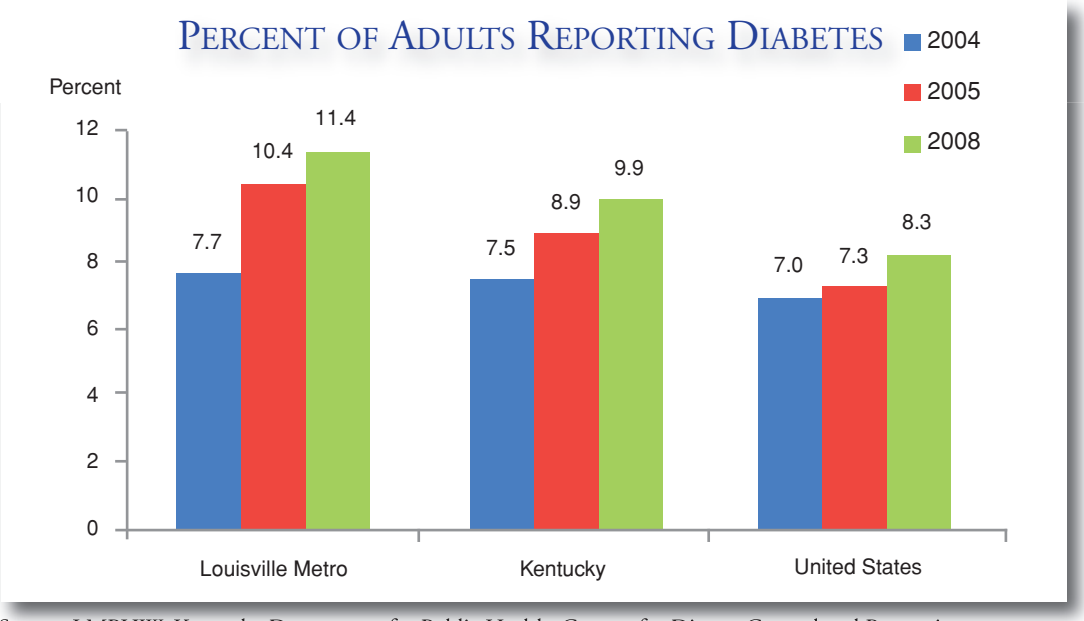
What is Louisville Metro's status?

The age-adjusted diabetes mortality rate was 32.0 deaths per 100,000 population for Louisville Metro in 2006. This rate was higher than state and national rates of 25.9 and 23.3, respectively.[5] For Louisville Metro African Americans, the age-adjusted death rate from diabetes (66.1 per 100,000 population) was more than double the rate for Louisville Metro Whites. While the rate for African Americans did not decrease as much as the rate for Whites from the previous year, both groups saw a decline. The 2006 age-adjusted death rate from diabetes for Louisville Metro's males was higher than that of the female death rate.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

A survey called the Behavioral Risk Factor Surveillance System (BRFSS) administered by LMPHW in 2004, 2005, and 2008 asked participants living in the Louisville Metro area: "Have you ever been told by a physician that you have diabetes?" This measure only counts people who reported having a confirmed diagnosis of diabetes. Survey results from each of the three years reveal an increasing trend in the number of Louisville Metro residents with diabetes.



Source: LMPHW; Kentucky Department for Public Health; Centers for Disease Control and Prevention

Asthma

What is it?

Asthma is a chronic disease of the airways that carry air to the lungs. Asthma causes inflammation of these airways resulting in limited airflow. When this occurs, people can experience episodes of breathlessness, wheezing, and coughing that can be distressing and even fatal. While the exact causes of asthma are unknown, research has proven that genetic and environmental factors play a significant part in the symptoms and in triggering asthma episodes or attacks. Under the regular care of a physician, asthma can often be diagnosed and managed.[14]

Why is it important?

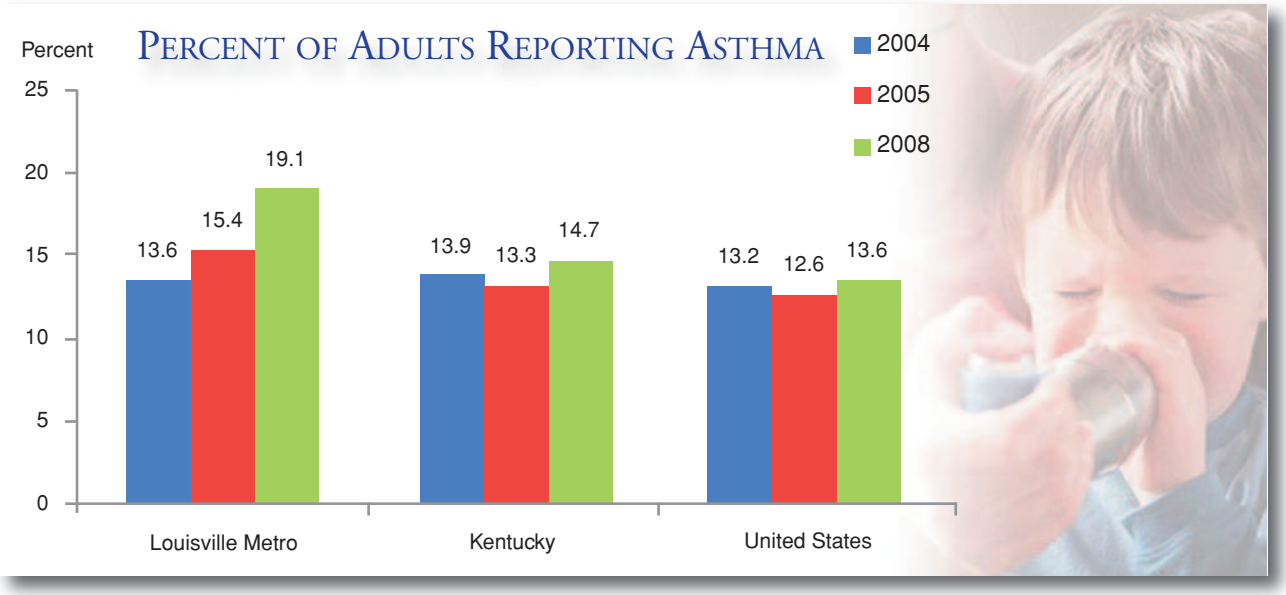
Asthma cases, particularly among children, can have a serious impact on a community. In 2008, approximately 16.4 million adults and 7 million children in the U.S. were reported as having asthma.[17] Similar to the national rate, over 8% of Kentuckians reported having asthma in 2006.[18]

While asthma rates have been stable since 2000, the difference by gender, race and income is significant. In Kentucky, almost twice as many women suffer from asthma than men. Asthma rates are also higher among individuals with lower levels of education and income. Over 15% of Kentuckians earning less than $15,000 annually reported having asthma compared to 4.4% of those earning more than $75,000 annually.[18]

Asthma can have a negative effect on the physical, cognitive, social, and emotional development of a child. Children from low income families are more likely to develop asthma and it affects a higher percentage of African American children than White in the U.S. It is also the leading causes of school absenteeism. In 2003, an estimated 12.8 million school days were missed due to asthma and it is the third ranking cause of hospitalization among children under 15 years of age.[19]

What is Louisville Metro's status?

The BRFSS surveys asked respondents if a physician or other health professional had told them they have asthma. An increase was exhibited across the local, state, and national populations. However, the percent of Louisville Metro adults reporting asthma rose significantly higher from 13.6% in 2004 to 19.1% in 2008.



Source: LMPHW; Kentucky Department for Public Health; Centers for Disease Control and Prevention

Behavioral Risk Factors

What is it?

All of the chronic diseases discussed in this section have certain risk factors associated with them. Modifications in a person's lifestyle can decrease the risk of some of these factors. The Behavioral Risk Factor Surveillance System (BRFSS) phone survey was conducted by LMPHW in 2004, 2005 and 2008 to gather information about these risk factors for Louisville Metro residents. Therefore, the survey findings are based on self-reported data. The standardized questions were approved by the U.S. Centers for Disease Control and Prevention (CDC) and used throughout the United States. People were selected for interviews by random dialing of phone numbers and remain anonymous.

Why is it important?

Gathering information on factors that affect health is essential to promoting optimal health for Louisville Metro residents. Identification of these risk factors in the population helps the health department in planning and implementing programs that will improve the health of community residents.

Amount of Exercise
When you are inactive, your blood circulation is less efficient. Moderate exercise can help keep blood pressure and cholesterol levels within normal ranges, thereby reducing the risk of heart disease, stroke, and diabetes. If you eat the same calories in your diet but decrease your level of activity as you get older, your weight will increase. A moderate activity level is needed to maintain a healthy weight.

Cigarette Smoking
Cigarette smoking has been linked to heart attacks, strokes, artery disease in the legs, and lung cancer. Nicotine raises blood pressure and the cigarette smoke thickens the blood, making it more likely to clot. The carbon monoxide reduces the amount of oxygen the blood can carry to the brain. Secondhand smoke also can result in the same problems for the person inhaling the smoke from smokers. Giving up smoking is definitely a lifestyle modification that will reduce the risk of these chronic diseases.

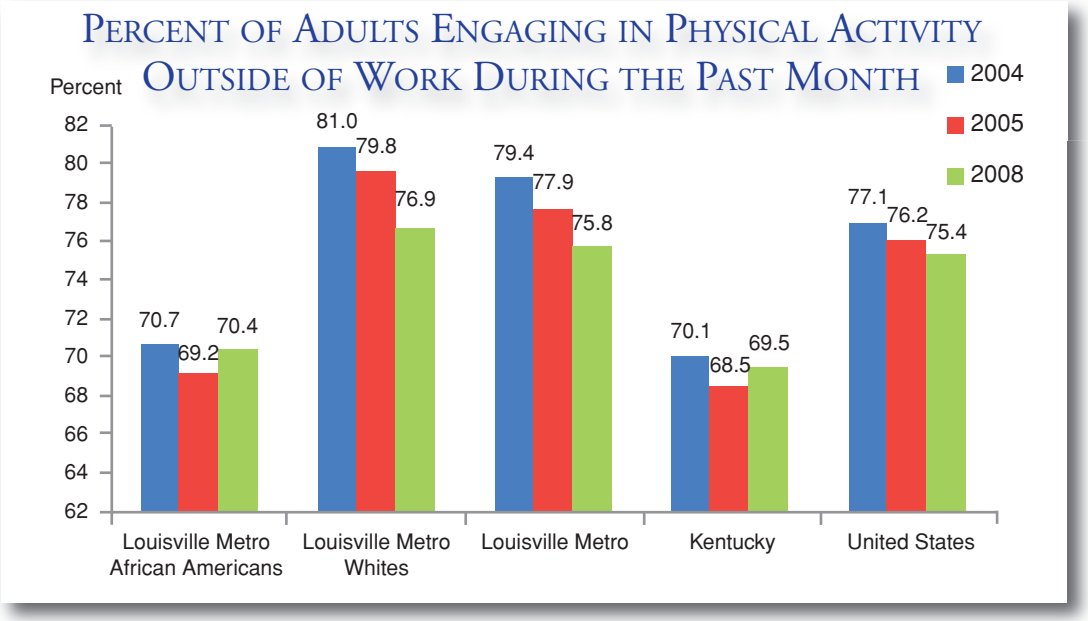
Obesity and Overweight
Being overweight increases your risk of having a stroke, heart disease, high blood pressure, and type II diabetes.

Nutrition
A diet high in fat and cholesterol increases the risk of heart disease, stroke, and diabetes. For optimal health, it is recommended that you eat five or more servings of fruits and vegetables every day.

What is Louisville Metro's Status?

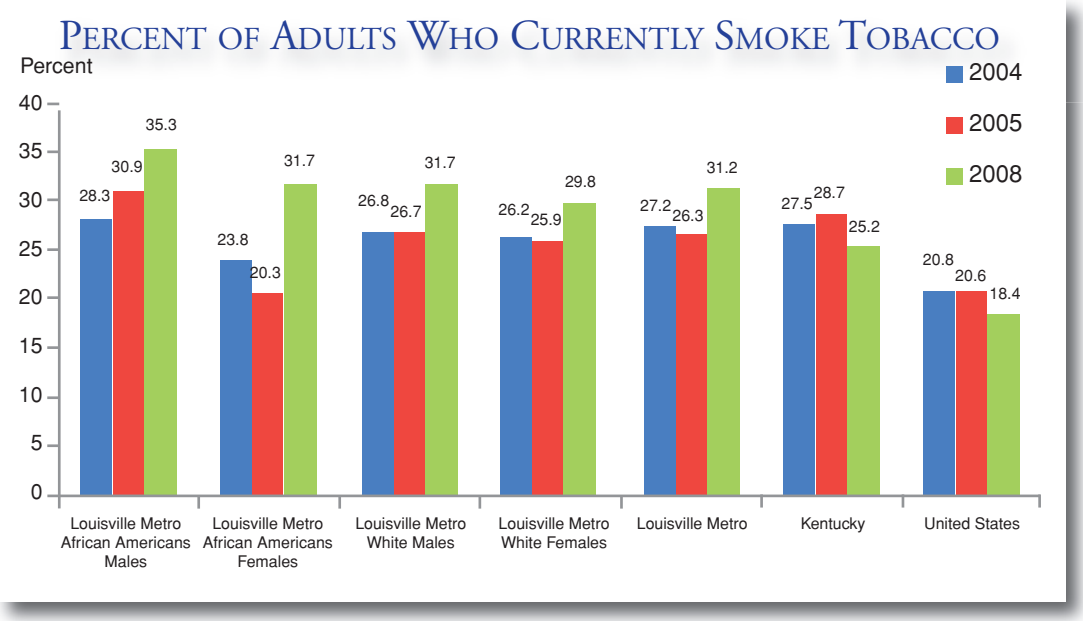
The BRFSS survey asked respondents if they participated in any physical activities or exercise during the past month such as running, golf, gardening, or walking other than their regular job duties. While the percentage of Louisville Metro residents who reported physical activity has declined, it remained higher than state and nation level in 2008. The percent for Louisville Metro Whites continues to be significantly higher than Louisville Metro African Americans.

Research has revealed that the characteristics of the physical environment (presence and quality of parks and sidewalks, availability of healthy foods in neighborhood stores, etc.) are directly linked to eating and activity behavior. Thus, low income communities and communities of color often face significant environmental barriers to optimal eating and physical activity.[20] The prevalence of violence in a community has also been proven to have a negative effect on physical activity, particularly among children. Therefore, addressing racial disparities related to behavioral risk indicators such as physical activity will require addressing the social determinants that impact a community's overall health status and quality of life.



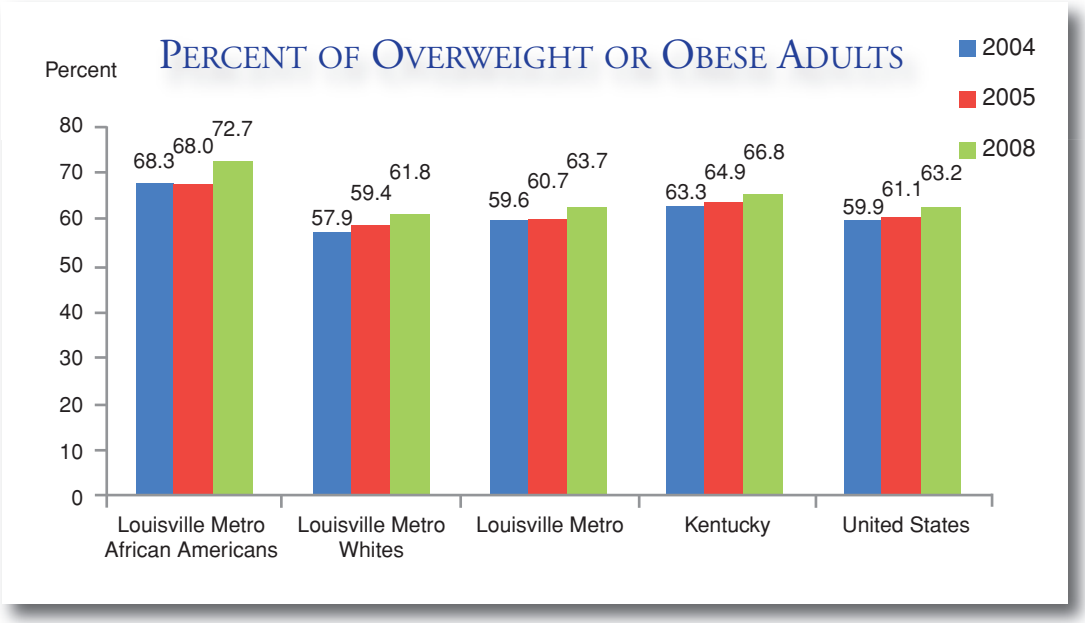
Source: LMPHW; Kentucky Department for Public Health; Centers for Disease Control and Prevention

The BRFSS survey also includes questions about smoking cigarettes. Louisville Metro and Kentucky have been consistently higher than the percent who currently smoke cigarettes in the United States. In 2008, the population reporting the highest percent who currently smoke tobacco was Louisville Metro African American males.



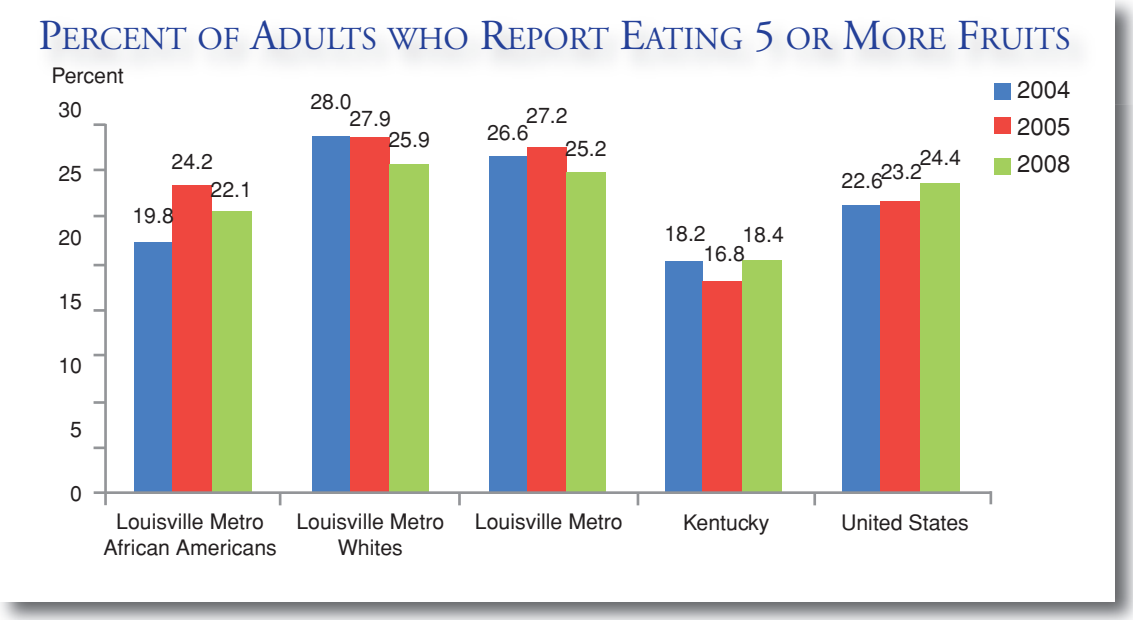
Source: LMPHW; Kentucky Department for Public Health; Centers for Disease Control and Prevention

The BRFSS survey also asked participants for their height and weight to compute a Body Mass Index (BMI). The BMI is a calculated index that attempts to normalize weight for height as an indirect measurement of body fat. A BMI of 25 to 29 is classified as overweight and a BMI of 30 or more indicates obesity. Approximately 64% of Louisville Metro residents reported heights and weights that converted to a BMI indicating they were overweight or obese. This rate was lower than the rate for Kentucky but similar to the national rate. African Americans were reported to be more likely overweight or obese when compared to Louisville Metro Whites.



Source: LMPHW; Kentucky Department for Public Health; Centers for Disease Control and Prevention

The percentage of Louisville Metro residents that reported eating five or more servings of fruits and vegetables each day was greater than the percentages for Kentucky and United States. However, the data reflect that the majority of the people are not eating the recommended daily amount of fruits and vegetables. Proper nutrition is important to an individual's ability to prevent disease and complications from existing disease. It is a universal problem in our community and nation that the majority of the adults are not eating a diet needed to maintain optimal health.



Source: LMPHW; Kentucky Department for Public Health; Centers for Disease Control and Prevention

Note: Data reported for state and national percentages were based off 2003 and 2007 BRFSS.

What are we doing?

Community Health Education and Promotion program staff work toward "a community equipped with knowledge, skills, and resources to achieve optimal wellness," by collaborating with community partners and stakeholders.

Specific areas of emphasis for chronic disease prevention are listed below:

Nutrition

- Support Mayor's Healthy Hometown Movement with technical assistance and educational materials related to nutrition topics.
- Convene and staff Mayor's Healthy Hometown Food in Neighborhoods Committee to advance policy and systems changes which will increase access to and distribution of healthy foods (e.g. Healthy in a Hurry Corner Store Initiative, farmers markets in underserved neighborhoods), also part of Healthy Kids, Healthy Communities (HKHC).
- Partner with Community Farm Alliance to promote healthy eating via farmer's markets and an annual Food Summit.
- Partner with Economic Development Department to promote the Farm to Table initiative, which creates channels with area farmers to make locally-grown foods available to consumers in their homes, schools, restaurants, workplaces and elsewhere.
- Develop and provide educational materials and programs about artificial trans fat for Department employees and community groups.
- Provide educational materials at health fairs and other events; topics focus on weight control and nutrition.
- Loan displays for health fairs or other educational events.

- Support YMCA's Diabetes Prevention Program and Family Health Centers' chronic disease prevention efforts with teaching about healthy eating.
- Work with community partners to provide relevant nutrition and healthy eating education to school-age children.

Diabetes

- Conduct Diabetes Self Management Series seven times per year at variety of locations throughout Louisville Metro.
- Provide leadership for the Louisville Heart Disease, Stroke Prevention and Diabetes Coalition.
- Conduct diabetes social marketing campaign, utilizing billboards, bus shelters, newspaper, and radio advertisement.
- Host monthly Diabetes Support Group at Park Duvalle Community Health Center.
- Provide professional education programs for nurses, nutritionists and other healthcare providers.
- Conduct primary prevention programs for businesses and community groups to help prevent Type 2 diabetes.
- Provide diabetes-related information, resources and displays at agency and community events and health fairs.
- Collaborate with the Louisville Urban League to reach and provide education to African Americans with diabetes.
- Provide leadership to more than 15 professional groups and coalitions, including Kentucky Diabetes Network,

Heart Disease and Stroke

- Convene two meetings of the Louisville Heart Disease, Stroke Prevention and Diabetes Coalition.
- Collaborate with Mayor's Healthy Hometown Worksite Wellness Committee to promote employee awareness of signs and symptoms of heart attack and importance of calling 911.
- Work with Norton HealthCare to support their "Pressure Cooker" events designed to educate and empower African Americans about heart health via healthy eating and physical activity.
- Implement a heart health/diabetes awareness mass media campaign.
- Provide education about artificial trans fat.

Physical Activity

- Work with Metro Parks and YMCA of Greater Louisville to expand free and low cost fitness classes to underserved neighborhoods of Louisville.
- Work with Metro Parks and YMCA of Greater Louisville to provide physical activity education and host summer track and field events for summer camp participants.
- Convene Mayor's Healthy Hometown Movement Advisory Council four times annually to share ideas, report progress, and develop new partnerships to promote active living in Louisville.
- Develop Mayor's Miles Program to include locations at schools, businesses, parks, neighborhoods and other related venues in Louisville.
- Work with JCPS schools that receive Safe Routes to School funds to support pedestrian safety for students and families.
- Convene and staff Mayor's Healthy Hometown "Active Living" Committee to promote systems and environmental changes that support pedestrian and bicycle safety and infrastructure.
- Convene and staff Mayor's Healthy Hometown "Schools" and "Worksites" Committees to support

positive changes for physical activity in schools and at worksites via worksite wellness programs.
- Staff and support Mayor's Hike and Bike Events 2x/year and Mayor's Hike at Jefferson Forest.
- Work with community groups to conduct walkability assessments in three neighborhoods, and connect with Metro Planning and Design to prioritize projects in those neighborhoods as part of Healthy Kids, Healthy Communities (HKHC), a national program of the Robert Wood Johnson Foundation.

Tobacco

- The Tobacco Prevention and Cessation Program works to address the following goals:
- Prevent initiation of tobacco use among young people
- Promote cessation of tobacco use among young people and adults
- Eliminate nonsmokers' exposure to environmental tobacco smoke
- Eliminate the disparities related to tobacco use and its effects among different population groups

The Tobacco Program staffs the Jefferson County Smoke Free Coalition has 170 members representing 97 businesses, non-profit organizations, government agencies, and individuals.

Program activities include:

- Expand the number and locations of Cooper-Clayton stop smoking classes for adults to include every neighborhood in Louisville Metro. Increased to 40 classes this year.
- Receive KIPDA funds to provide free Nicotine Replacement Therapy (NRT) to individuals age 60 and older.
- Distribute two (2) mailings of Cooper Clayton brochures, 1-800-QUIT NOW fax referral forms, Quit line prescription pads in English and Spanish to every doctor, dentist and dental hygienist in Louisville Metro.
- Offer FREE NRT to any Cooper Clayton participant since May 2009.
- Promote and advertising the 1-800 Quit Line in Jefferson County
- Offer free NRT to all Cooper Clayton class participants.
- Increase unduplicated number of CC participants increased in 2009 by 123%.
- Surveyed Cooper Clayton participants to determine satisfaction. Data showed the program was well received by participants.
- Sponsor two bilingual Positive Social norms campaigns in English and Spanish to be focused on areas with large Espana population.
- Translate the 1-800 QUIT NOW line prescription pads into Spanish, French, Vietnamese, and Bosnian.
- Create tobacco education presentations in Spanish for parents of Jefferson County school children.
- Support Mother's Day Out events.
- Implement mobile phone SMS/texting tobacco cessation grant from DHS to develop a program for youth. A second narrative will be developed for adults
- Refine and implement Positive Social Norms Media campaigns in JCPS middle and high schools.
- Offer smoking cessation classes Not on Tobacco (NOT) to youth in schools and community centers via a "train the trainer" opportunity. This method will ensure there are multiple facilitators to educate more schools within the community.
- Provide Professional Development Day about tobacco education curricula for JCPS teachers.

Men's Health Initiative

- The Center for Health Equity provides administrative oversight the Men's Health Initiative. These programs focus more on promoting systems change rather than changing individuals' personal choices. As part of the Men's Health Initiative, the A.M.E.N. program focuses on conducting community-based participatory research and community engagement designed to improve health outcomes among African-American men in the Louisville Metro area.

What else should we do?

- Work to create Mobile Markets to increase access to healthy foods, and work with restaurants on a local menu labeling policy to assist consumers in making healthier food choices.
- Capitalize on the community gardening movement to educate Louisville residents on the health, environmental, and social benefits of growing our own food.
- Encourage Metro Council to expand the 2nd Sunday event in 2010 and close major thoroughfares for walking, biking and other activities on the 2nd Sunday in October.
- Continue to partner with Metro Parks, Public Works, Planning and Design, Economic Development and other metro agencies to build Health Impact Assessments into new and existing construction/improvement projects.
- Work with Public Works to fully implement the Complete Streets policy into the Land Development Code.
- Expand text messaging services to other health education programs and add other languages.
- Focus on expanding smoke-free policy regarding SHS exposure to children in homes and vehicles.
- Develop a nutrition and weight loss program essentially like the YMCA-sponsored Diabetes Prevention Program with an incentive (e.g., YMCA membership) for participants.

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Oral health refers to the health of the oral cavity, which includes the mouth and throat. Cavities (tooth decay), gum disease, tooth loss and cancer are some of the conditions that may affect a person's mouth and throat.

Last Visit to a Dentist or Dental Clinic

What is it?

The period of time that has passed since an individual made a visit to a dentist or dental clinic is an indication of how frequently the individual is seen by a dentist.

Why is it important?

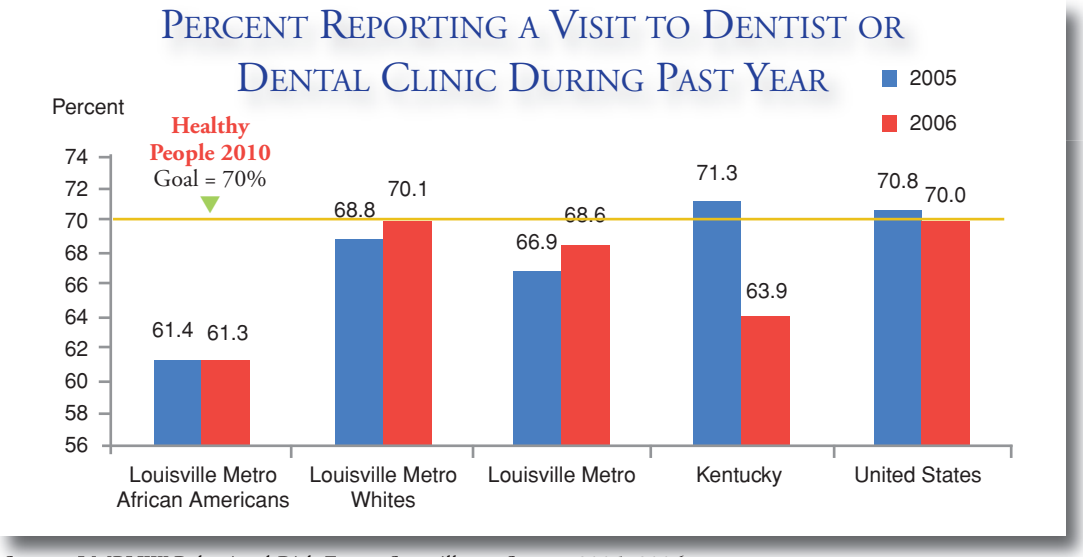
Research has proved the strong relationship between oral health and general health. For example, tobacco, alcohol and illicit drugs not only affect overall health but oral health as well.[1] Poor oral health conditions can cause pain, poor nutrition, absence from school and work, poor appearance, diminished self-esteem and even death. Not only do oral health problems affect families' quality of life and ability to succeed but it can also be very costly. In 2008, an estimated $102 billion was spent on dental services in the United States.[2]

Children and adolescents from low income families and certain racial or ethnic groups experience untreated decay at a disproportionately higher rate. For example, 40% of Mexican-American children aged 6 to 8 years old have untreated decay, compared to 25% of Non-Hispanic Whites. Approximately half of all children and two-thirds of children aged 12 to 19 from low income families have had tooth decay.[2]

Regular visits to a dental health professional help in the prevention and early detection of tooth decay and gum disease. Early detection of these conditions can result in better oral health outcomes. Healthy Kentuckians 2010 has set a goal of increasing the percent of adults who went to a dentist or dental clinic during the past 12 months to 70%.[3]

What is Louisville Metro's Status?

In 2005 and 2008, the BRFSS survey administered by the Louisville Metro Department of Public Health and Wellness asked residents if they visited a dentist or dental clinic within the last year. In 2008, the percentage of Louisville Metro Whites respondents met the Healthy Kentuckians 2010 Goal of 70%. However, the percent of African Americans that visited a dentist had not significantly changed and remained below the Healthy Kentuckians 2010 Goal. The percent of Louisville Metro respondents visiting a dentist during the past year was higher than the state (63.9%), but lower than the national rate (70%).[4]



Source: LMPHW Behavioral Risk Factor Surveillance System 2005, 2006

Last Preventive Dental Visit

What is it?

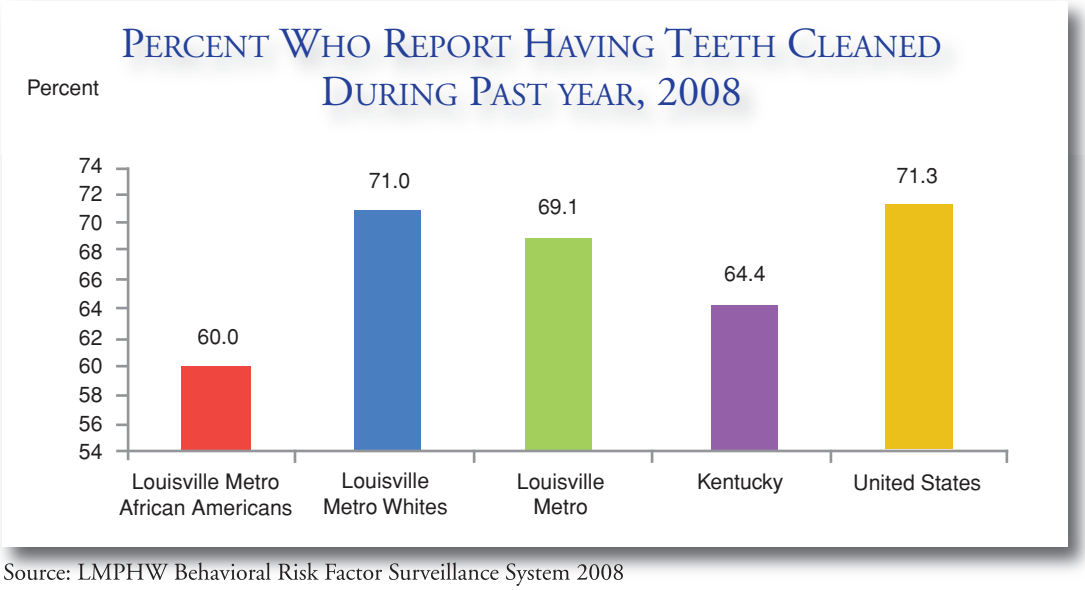
Preventive dental visits typically include teeth cleaning performed by a dentist or dental hygienist and a dental examination. The primary purpose of teeth cleaning is to remove deposits such as plaque and tarter which can lead to periodontal disease.

Why is it important?

Preventive dental visits are vital to ensuring good oral health. Regular visits to the dentists, particularly for children, is important for screening for disease and injury and identifying potentially serious conditions at a sufficiently early stage to prevent further problems. Regular preventive health visits have been associated with fewer emergency room visits and avoidable hospitalizations.[5]

What is Louisville Metro's status?

In 2008, the BRFSS survey asked respondents if they had their teeth cleaned during the last year. Sixty-nine percent reported having had their teeth cleaned during the past year, with approximately 18% more of Louisville Metro Whites than African Americans. Oral disease and inadequate access to oral health care are system-wide problems in Kentucky and U.S. However, they are not distributed evenly in the population. Research has found that low income families have twice the prevalence of dental caries than higher-income families. Due to the disproportionate number low income African American families and other racial/ethnic groups, disparities in oral health and access also exist.



Source: LMPHW Behavioral Risk Factor Surveillance System 2008

What are we doing?

The Louisville Metro water supply is treated with fluoride. The Louisville Metro Public Health and Wellness (LMPHW) routinely monitor the level of fluoride in the water supply under the direction of the University of Louisville School of Dentistry (ULSD). The ULSD and the LMPHW participate in community health fairs where they provide educational materials on oral health and perform oral health screenings.

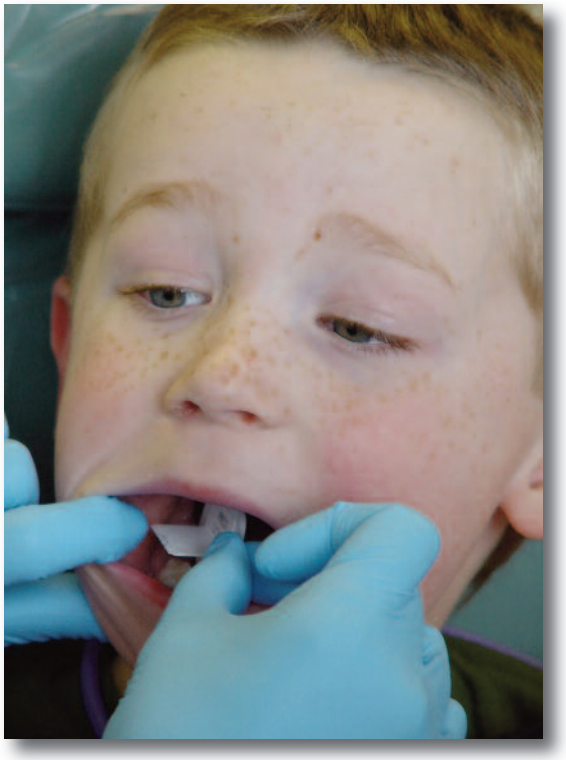
LMPHW also works with the Kentucky Department for Public Health in the KIDS SMILE program. This program is for children up to 5 years of age who receive a "fluoride varnish" treatment, which consists of applying fluoride on the child's teeth. The fluoride varnish, which is absorbed by the enamel of the teeth, provides additional resistance to tooth decay for up to three months.

LMPHW and ULSD also work on oral health initiatives with the following partners:

- Jefferson County Public Schools and their Health Promotions Schools of Excellence
- The Teenage Parent Program
- Area Health Education Center
- Smile Kentucky, which includes doing fluoride varnish and sealant applications at the Kentucky State Fair
- Head Start and Early Head Start
- Kentucky Cancer Project
- Metro Dental Safety Net, which works to insure access to dental care and provision of emergency dental care

LMPHW has a mobile dental unit that is relieving the tooth pain of the adults all across our community. The **Mobile Dental Unit** provides services in the community three days a week. On Mondays and Tuesdays, the unit is at the Southwest Government Center, 7219 Dixie Highway. On Tuesdays, the unit is located at the East Government Center, 200 Juneau Drive. On Thursdays, the unit is at the Newburg Community Center, 4810 Exeter Drive. Future plans include a fourth location.

LMPHW also has portable dental equipment that is used for outreach to underserved populations. This equipment is available to be checked out by dentists in the community to do outreach services as well.



What else do we need to do?

The health department will investigate expanding the fluoride varnish program for preschoolers. It should also consider making the training for fluoride varnish application required for all department employees who provide dental services to preschool children.

Issues related to access must be continued to be addressed by pursuing appropriate and available funding to increase the oral health services in the community so that low-income and other underserved patients get the dental care they need.

LMPHW will also pursue the development of appropriate oral health education information and outreach to semi-independent older adults.

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What is it?

The World Health Organization (WHO) defines mental health as a "state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community."[1] The positive dimension of mental health is stressed in WHO's definition of health as contained in its constitution: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[1]

Mental illnesses are medical conditions that disrupt a person's thinking, feeling, mood, ability to relate to others and daily functioning.[2] Very often it results in a diminished capacity for coping with the ordinary demands of life and may be caused by a reaction to environmental or internal stresses, genetic factors, biochemical imbalances, or a combination of these factors. There are more than 200 classified forms of mental illness. Examples include psychotic disorders, mood and anxiety disorders, organic brain disorders, and personality disorders.

Serious mental illnesses include major depression, schizophrenia, bipolar disorder, obsessive compulsive disorder (OCD), panic disorder, post traumatic stress disorder (PTSD) and borderline personality disorder. Fortunately, recovery from mental illness is possible. With an adequate individual treatment plan that includes medication and support services such as therapy and peer support groups, people diagnosed with a serious mental illness can experience relief from their symptoms.

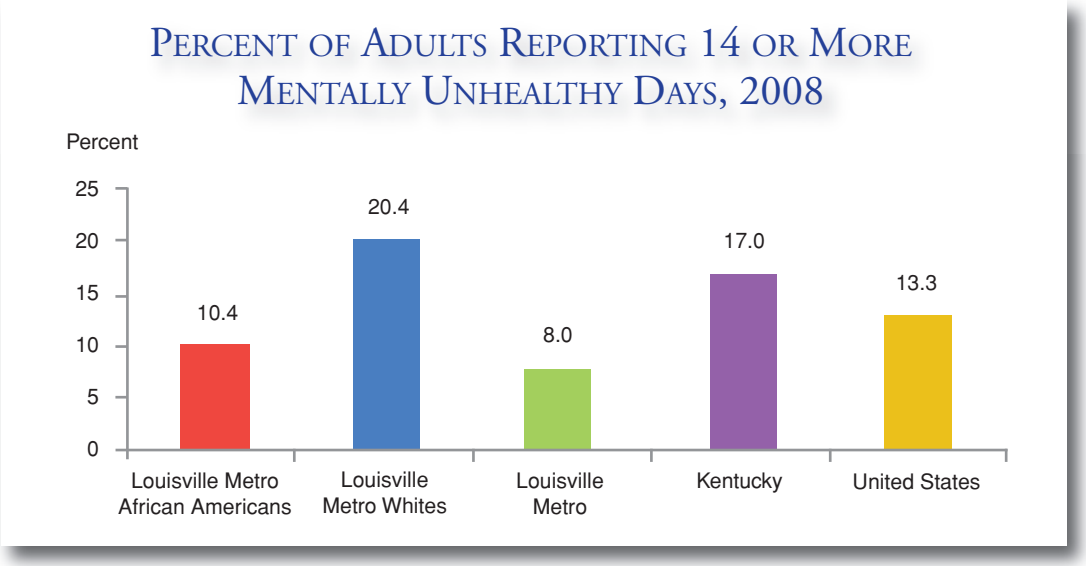
Why is it important?

Mental illness affects up to 20% of people during a year, regardless of age, gender, race, ethnicity, religion or economic status.[3] Forty percent of people diagnosed with alcohol dependency and substance abuse display signs of mental disorders prior to initiating drug use.[1] Mental illness can lead to suicide.

Due to the lack of understanding and the stigmas associated with mental health issues, people may not seek treatment. For example, while the number of persons in treatment grows every year, two-thirds of people with depression still receive no treatment.[3]

What is Louisville Metro's status?

In 2008, Louisville Metro Public Health and Wellness conducted a Behavioral Risk Factor Surveillance System (BRFSS) telephone survey of over 2,000 Louisville Metro adults and inquired about participants' mental health. Approximately 13.3% reported perceiving at least 14 days out of the past month as "mentally unhealthy". Over twice the percentage of females than males reported mentally unhealthy days, with African American females having the highest percentage (20.4%).



Source: LMPHW Behavioral Risk Factor Surveillance System (BRFSS) Survey 2008

Beginning in adolescence and continuing throughout the entire life span, women are more likely than men to be diagnosed with depression. Studies have shown that the prevalence of depression among women is between one and a half to three times more than the prevalence among men.[4] Some contemporary theories attribute the difference in rates of depression between men and women to social causes, specifically that women may have a greater sensitivity to stressful life events and traumas. According to the Vulnerability-Stress Model, women's social role makes them more susceptible to depression.[4]

Several studies have found correlations between mental illness, race and gender. African American women are disproportionately more likely to experience social circumstances that increase their chances of developing a mental illness and are less likely to receive diagnoses and treatments for their mental illnesses than White Americans. Poverty, lack of education, unemployment, the breakdown of two-parent families and environmental stressors associated with systemic and interpersonal racism have been repeatedly cited as risk factors for mental illness in African American women.[5]

The percentage of African Americans receiving help for mental illness is only half that of non-Hispanic whites.[6] It is speculated that this may be due to less trust of the medical community by African Americans and the social stigma often associated with mental illness. Other reasons include the lack of health insurance or access to health care services.[6]

Suicide

What is it?

Suicide is a fatal injury that is intentionally self-inflicted. Suicide does not include fatal injuries that are the result of reckless behavior such as drinking and driving.

Why is it important?

Suicide is a serious public health issue that affects everyone. Medical costs and lost wages resulting from suicide and suicide attempts can also have a negative impact on a community. More than 33,000 people kill themselves in the U.S each year and suicide is the third leading cause of death for youth between the ages of 10 and 24.[7] The top three methods used to commit suicide by young people include firearm (46%), suffocation (39%), and poisoning

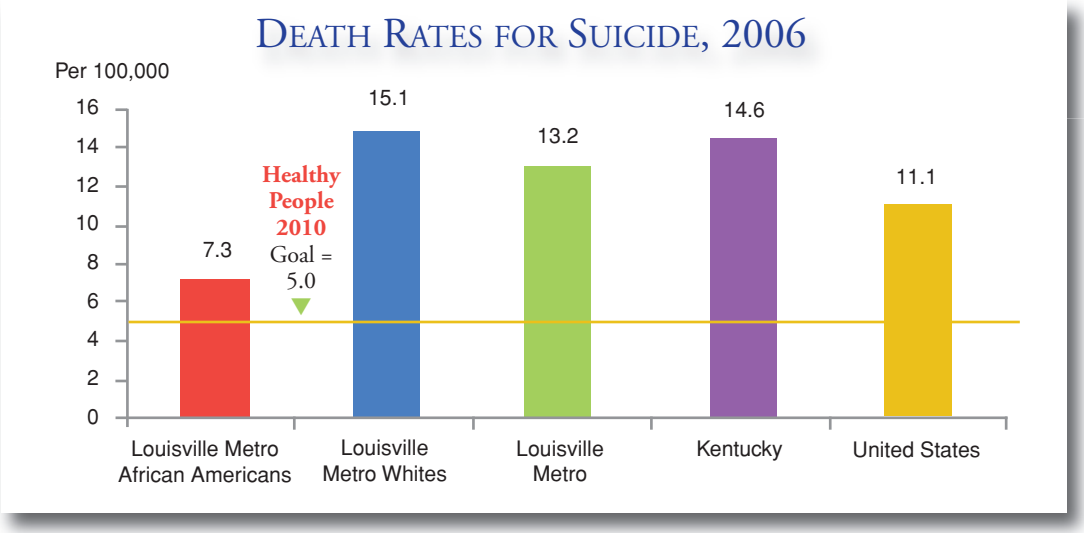
(8%).8 In Kentucky, suicide deaths outnumber homicide deaths 3 to 1 as of 2006.[9] Overall, the highest suicide rates were among persons aged 35-44 years and 75-84 years.[10]

Some groups are at a higher risk of committing suicide than others. Men are four times likely to commit suicide and die than women. Among youth aged 10 to 24, 83% of the deaths were males and 17% were females.[7] A disproportionate number of some racial and ethnic groups are also impacted by suicide. Statistics reveal that Native American/Alaskan Native and Hispanic youth have the highest rates of suicide-related fatalities. Hispanic youth are also more likely to report attempting suicide than their black and white, non-Hispanic peers.[8]

Factors that can put a person at risk of committing or attempting suicide includes previous suicide attempts, a history of depression or some other mental illness, alcohol or drug abuse, a physical illness or a feeling of loneliness.[7] While the social stigma associated with suicide still poses a barrier for those in need of help, suicide can be prevented with effective clinical care for mental, physical and substance abuse disorders.[10]

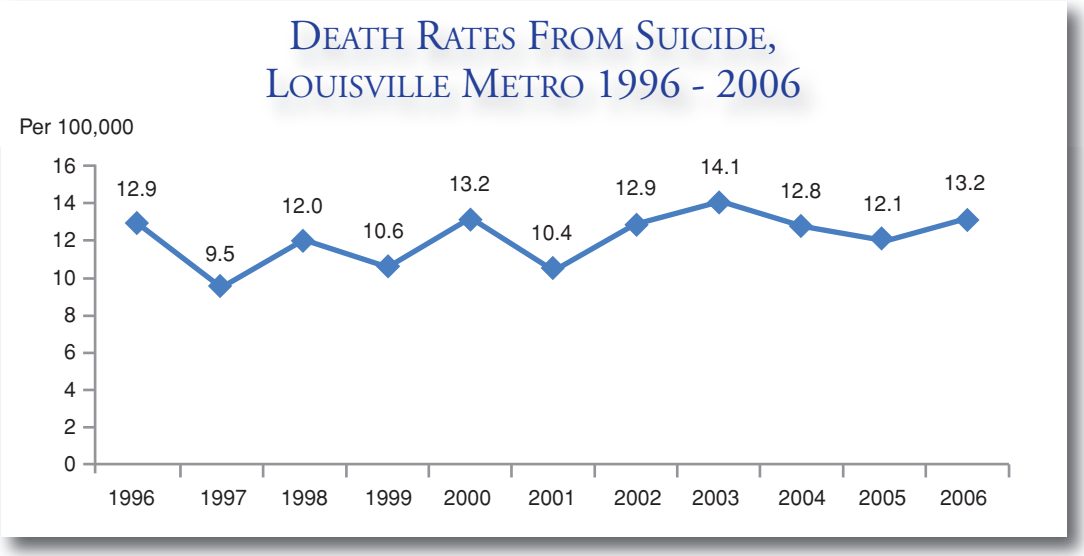
What is Louisville Metro's status?

In 2006, there were 93 suicide deaths in Louisville Metro. The age-adjusted mortality rate of 13.2 per 100,000 population was lower than the state rate of 14.6, but higher than the national rate (10.8)9 and more than three times the Healthy People 2010 goal.[11]



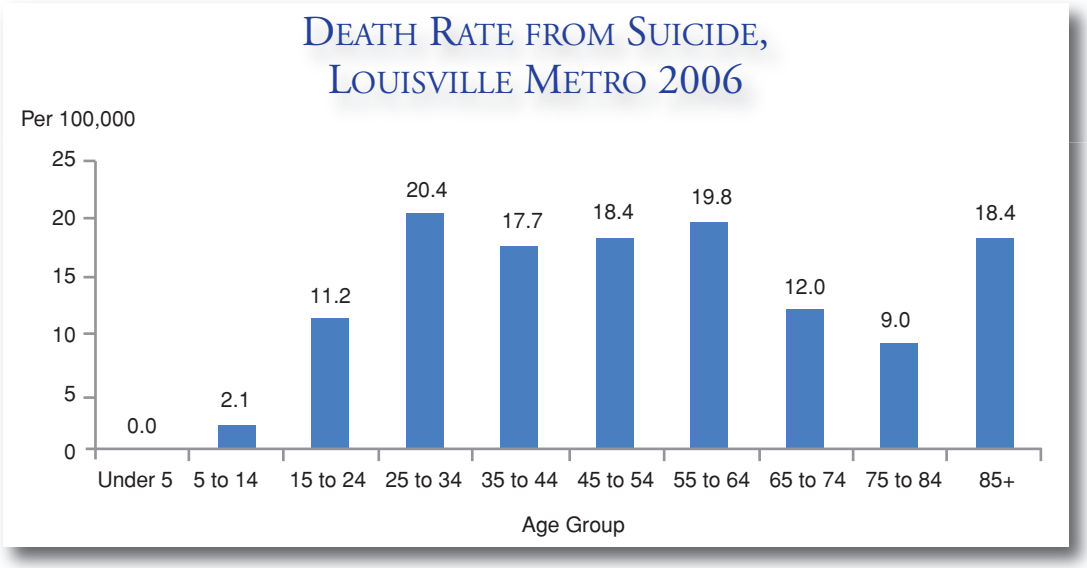
Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

Suicide deaths in 2006 increased from the previous year (12.1 per 100,000); however, both the number and rate of suicide deaths in Louisville Metro have fluctuated since 1995 with no consistent trend.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

In 2006, the highest rate of suicide was among those aged 25 to 34 years old, followed by those aged 55 to 64 years old.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

During 2006, the Louisville Metro age-adjusted suicide mortality rate for males was more than six times higher than females. State and national rates were also higher for males than females.[9, 10]

What are we doing?

What else do we need to do?

The Louisville Metro Department of Public Health and Wellness (LMPHW) continue to support research and intervention strategies that foster positive mental health outcomes, particularly for low income communities. Most recently, LMPHW has collaborated with the University of Louisville to conduct research on depression among adolescent mothers. A research team will work with community partners to develop a public health model addressing depression among teen mothers by developing a social marketing intervention aimed to improve the use of existing health services by teen mothers with symptoms of depression.

As part of LMPHW's emphasis on the "the mind-body connection" in health prevention and promotion efforts, the health department also provides free weekly classes in Tai Chi at the 400 E. Gray Street address. Research has revealed the mental and physical health benefits of this low-impact, slow-motion exercise.

What else do we need to do?

Stigma reduction not only helps decrease the reluctance of individuals to ask for help for their mental illness but stops perpetuating the public's ignorance, fear and rejection of those with a mental illness. A more strategic and collaborative effort must also be developed to address Racial/ethnic and socioeconomic disparities in access to mental health services.

Additionally, an increased emphasis must be placed on ensuring that children receive the mental health services they need to live a productive and healthy life. Promote public awareness of children's mental health issues and reduce stigma associated with mental illness. Scientifically proven prevention and treatment services for children's mental health must continue to be developed and implemented.

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Injuries can be "unintentional" or "intentional". The distinction is whether the person causing the injury did so accidentally or on purpose.

Unintentional Injuries

What is it?

When we refer to unintentional injury, we mean physical or bodily harm that was not purposefully inflicted. Although they are often referred to as "accidents," unintentional injuries are not random and most are preventable.

Why is it important?

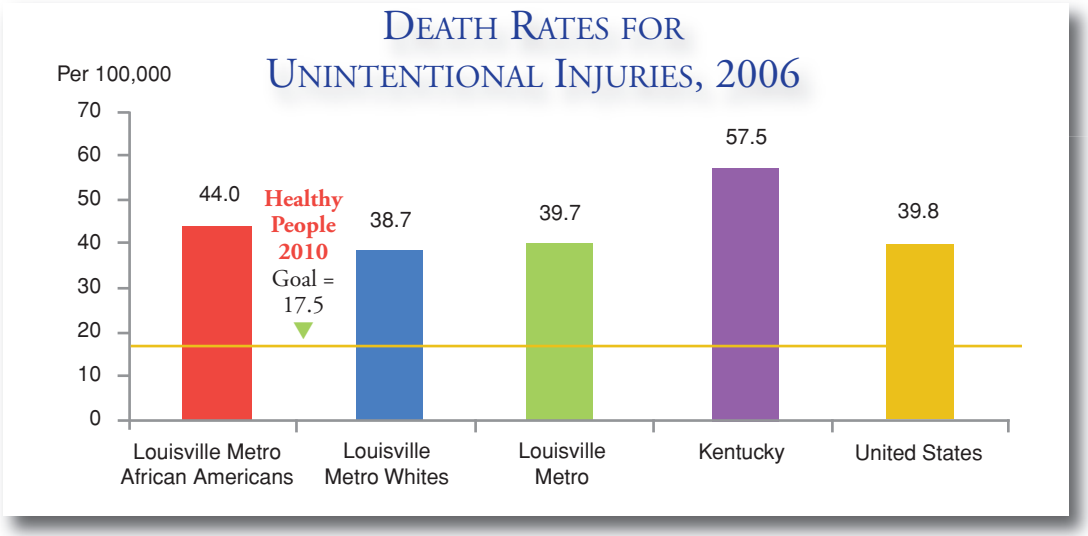
A safe community helps to create a healthy community. Residents should be able to walk, ride their bikes and do other outdoor activities without the risk of injury. Unintentional injuries are an important public health issue because not only are largely avoidable, but also represent an opportunity for prevention efforts that could significantly impact premature mortality. Yet, unintentional injuries, such as motor vehicle crashes, pedestrian and bicycle injuries, burns, falls, poisoning, drowning, and suffocation, are a leading cause of death for people ages 1-44 in the United States.[1] In 2006, unintentional injury was the fifth leading cause of death for people of all ages, with a death rate of 39.8 per 100,000 population.[2]

Unintentional injuries affect not only individuals, but society as well. Medical care, rehabilitation, lost wages and lost productivity associated with injuries costs billions of dollars each year in the U.S. The average cost of deaths related to motor vehicle injuries alone were approximately $1.3 million in 2007.[3]

Death and suffering caused by unintentional injuries also exist at a disproportionately higher rate within communities of color. This, in part, reflects inequities in socioeconomic status, type of employment, and hazardous exposures.[1] Between 1999 and 2002, the Asian or Pacific Islander population is reported to have the best rate of unintentional injuries. However, the rate for the American Indian or Alaska Native population was three times as high, and the rates for black non-Hispanic populations were twice as high.[4]

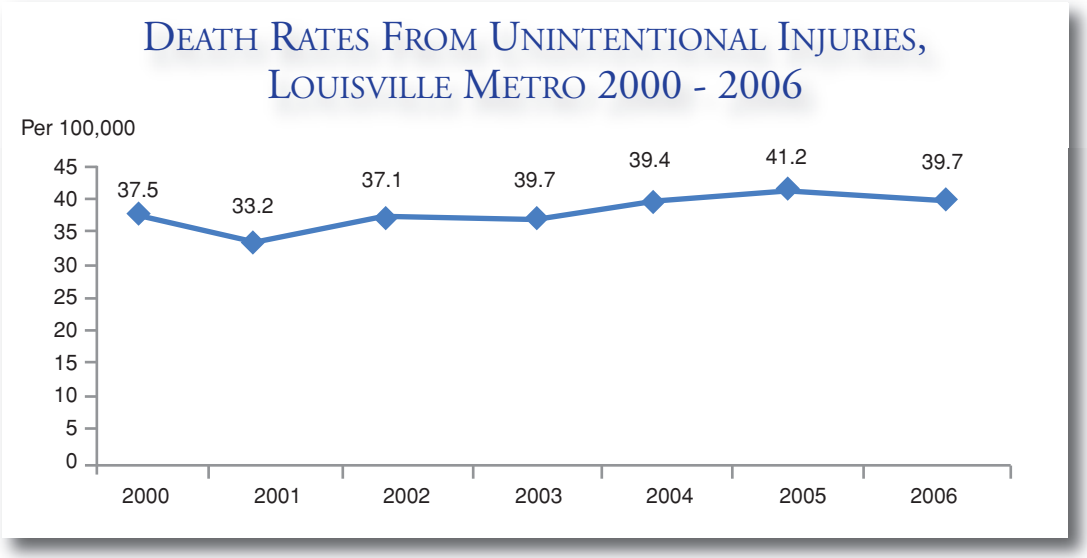
What is Louisville Metro's status?

In 2006, there were 280 unintentional injury deaths in Louisville Metro. The age-adjusted mortality rate from unintentional injuries was 39.7 deaths per 100,000 population. This was similar to the national rate (39.8), but lower than the previous year (41.2) and the state rate of 57.5.[2] However, it was still more than twice the Healthy People 2010 goal of 17.5 deaths per 100,000 population.[5] For Louisville Metro Whites, the age-adjusted death rate from unintentional injuries was 38.7 per 100,000 population, while the rate for African Americans was 44.0 per 100,000 population. While the rate of unintentional injuries for Whites decreased from 2005 (42.2), the rate for African Americans rose compared to the rate of 38.6 per 100,000 population in 2005.



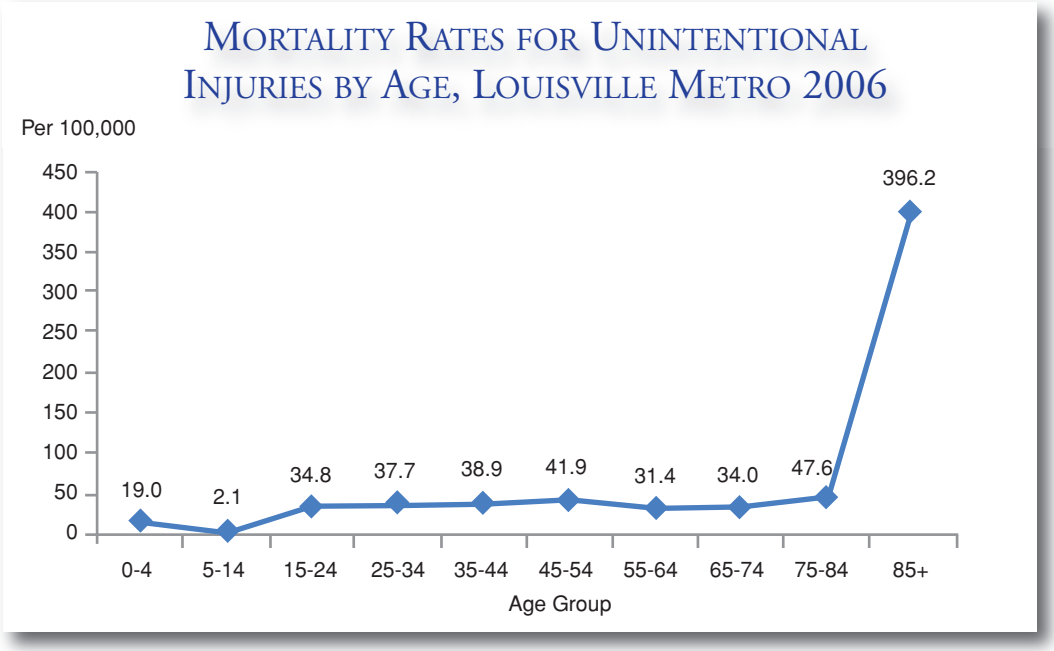
Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health, National Center for Health Statistics

Since 2000, the age-adjusted mortality rate for unintentional injury for Louisville Metro peaked at 41.2 per 100,000 population in 2005.



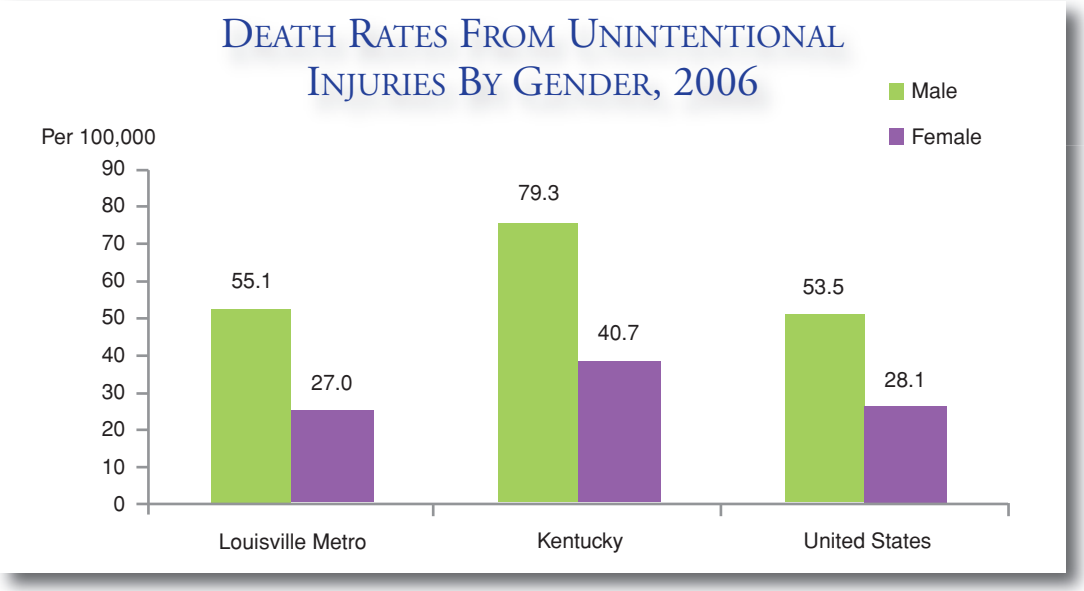
Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

The age-specific mortality rate from unintentional injuries was highest in the age category of 85 years and older. This highlights an increase need in addressing the safety issues, such as fall prevention efforts, related to the elderly.



Source: 2006 Louisville Metro Death Records

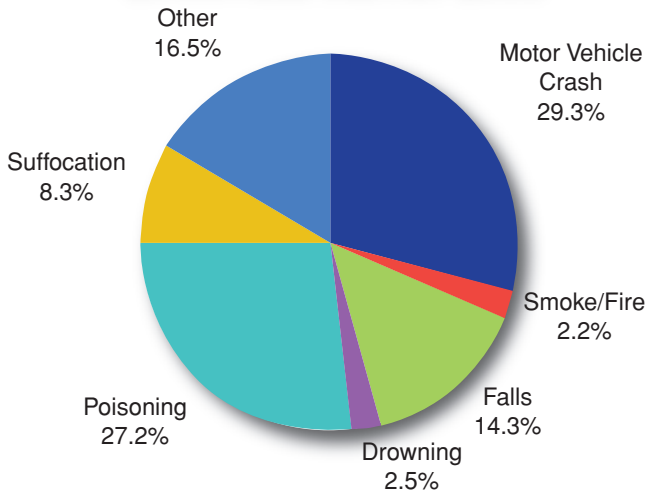
In 2006, the age-adjusted mortality rate for unintentional injury was highest among males when compared to females for local, state and national rates.[2, 6]



Sources: 2006 Louisville Metro Death Records, Kentucky Department for Public Health, National Center for Health Statistics

The largest category of unintentional injury deaths was motor vehicle crashes, followed by poisonings.

Unintentional Deaths by Mechanism, Louisville Metro 2006



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

Motor Vehicle Crashes

What are they?

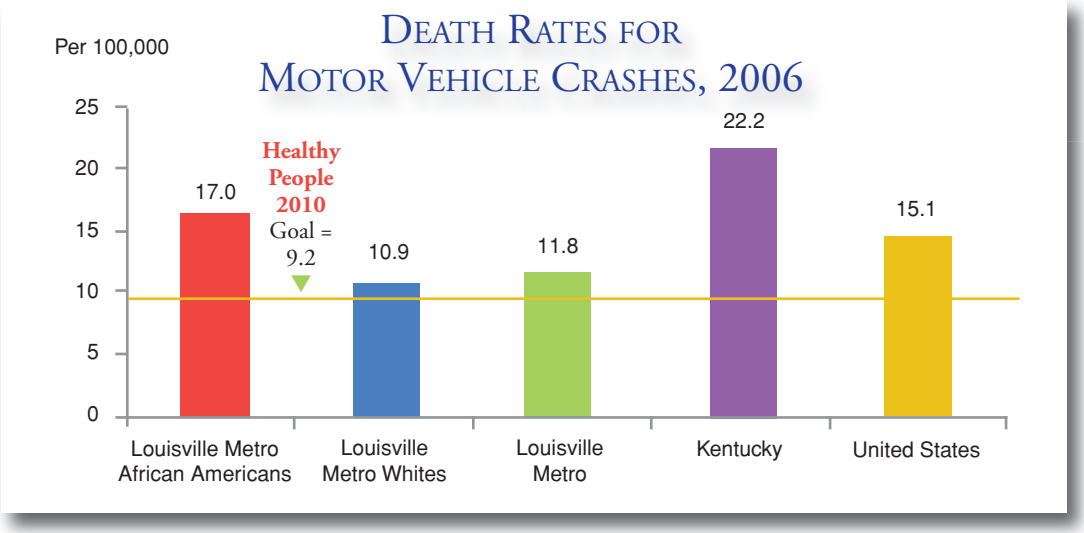
Injuries from motor vehicle crashes include those that occur to the occupants of motor vehicles as the result of a collision, as well as those occurring to pedestrians or cyclists who collide with motor vehicles. In 2006, there were 82 deaths of Louisville Metro residents resulting from motor vehicle crashes.

Why are they important?

Nationally as well as in Louisville Metro, motor vehicle crashes cause more unintentional injury deaths than any other category. They are the leading cause of death for children and young adults nationally.[7] Each year in the United States, over 41,000 people die as the result of motor vehicle crashes and millions more are injured. Costs associated with injury and death from motor vehicle crashes represents significant burden on our nation's economy, costing approximately $89 billion annually.[8]

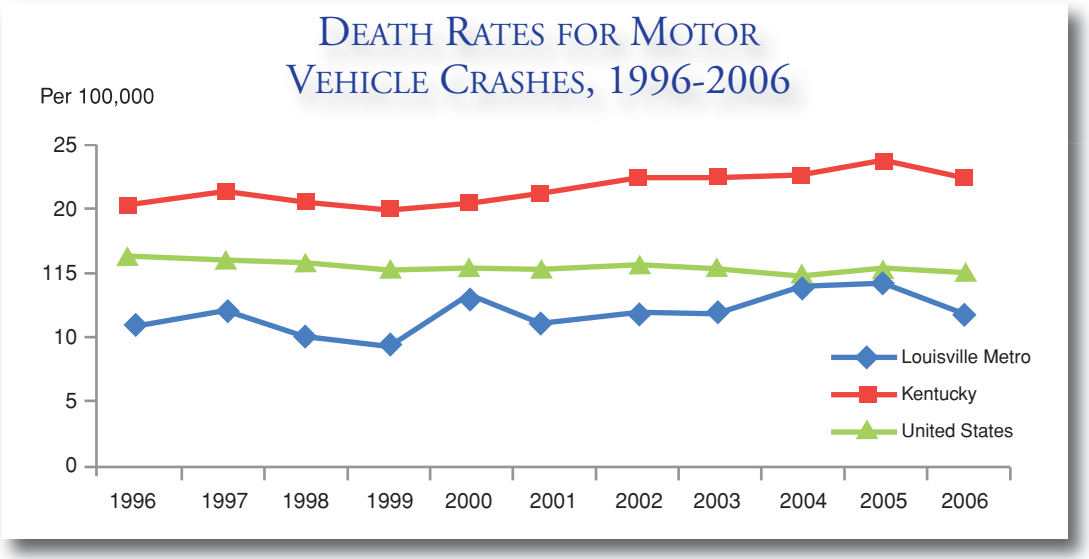
What is Louisville Metro's status?

In 2006, the Louisville Metro age-adjusted mortality rate from motor vehicle crashes was lower than both the state and national rates,[2] yet higher than the Healthy People 2010 goal of 9.2.[5] Louisville Metro African Americans exhibited a significantly higher age-adjusted death rate than Whites. Research suggests that this disparity may be attributable, in part, to low rates of seat belt use among African Americans compared with Whites. The use of seat belts reduces the risk of motor vehicle crash fatalities by 50% or more.[9] Thus, preventive interventions to promote seat belt use among African American motorists least could help reduce the racial disparity in crash fatalities.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

Since 1996, Louisville Metro has consistently exhibited lower age-adjusted death rates for motor vehicle crashes than the state and nation. Louisville Metro also saw an additional decrease in 2006 from the previous year.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

Males exhibited a greater age-adjusted mortality rate from motor vehicle crashes than females at the local, state, and national levels.[2, 6]

Pedestrian and Bicycle Crashes

What are they?

The pedestrian and bicycle crashes reported here include data on collisions between one or more motor vehicles and either one or more pedestrians or one or more bicyclists from the 2008 Kentucky Uniform Police Traffic Collision Report.

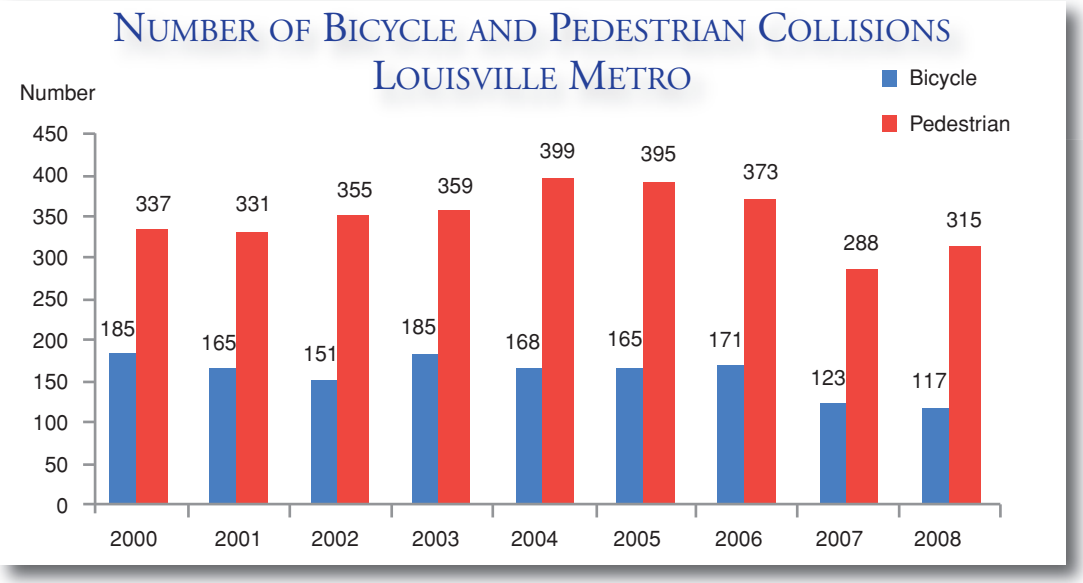
Why are they important?

Although walking and bicycling are means of transportation that provide an excellent opportunity to be physically active, the pedestrian or cyclist does not have the protection that a driver has inside a motor vehicle when involved in a collision. Therefore, the faster the speed of the motor vehicle upon impact, the more likely there will be serious injury or death for the pedestrian or cyclist.

In the last 15 years, more than 76,000 Americans have been killed while crossing or walking along a street in their community, including a disproportionate number of children, the elderly and ethnic minorities.[10] These deaths, labeled as "accidents," are usually attributable to an error on the part of a motorist. A recent study reports such accidents are caused by roadways that were "dangerous by design" with streets "engineered for speeding cars and made little or no provision for people on foot, in wheelchairs or on a bicycle." The same study ranked Louisville Metro as the 7th most dangerous metropolitan city for pedestrians in the nation.[10]

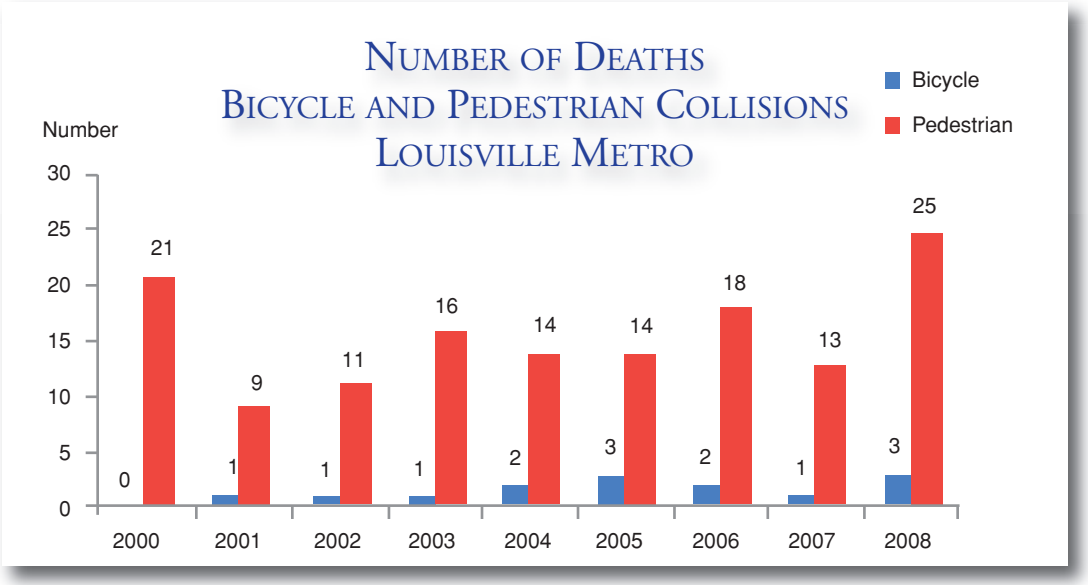
What is Louisville Metro's status?

For Louisville Metro, the numbers of bicycle and pedestrian collisions have not changed substantially from 2000 through 2006. During this period, the number of bicycle collisions ranged from 151 to 185 and 331 to 399 for pedestrian collisions. There were 48 and 85 less bicycle and pedestrian collisions in 2007, respectively. However, the number of pedestrian collisions increased from 288 to 315 in 2008.



Source: Kentucky Uniform Police Traffic Collision Reports 2000-2008

Since 2000, the number of cyclists killed in these collisions ranged from zero to three, while the number of pedestrians killed ranged from nine to twenty-five.



Source: Kentucky Uniform Police Traffic Collision Reports 2000-2008

More collisions for both cyclists and pedestrians occurred during non-rush hours, followed by evening rush hours (4pm to 6pm).

Of the 25 pedestrian deaths in 2008 where the time of day was known, 72% (or 18) occurred during hours of darkness and 20% (or 5) occurred during daylight hours.

Intentional Injuries - Homicide

What is it?

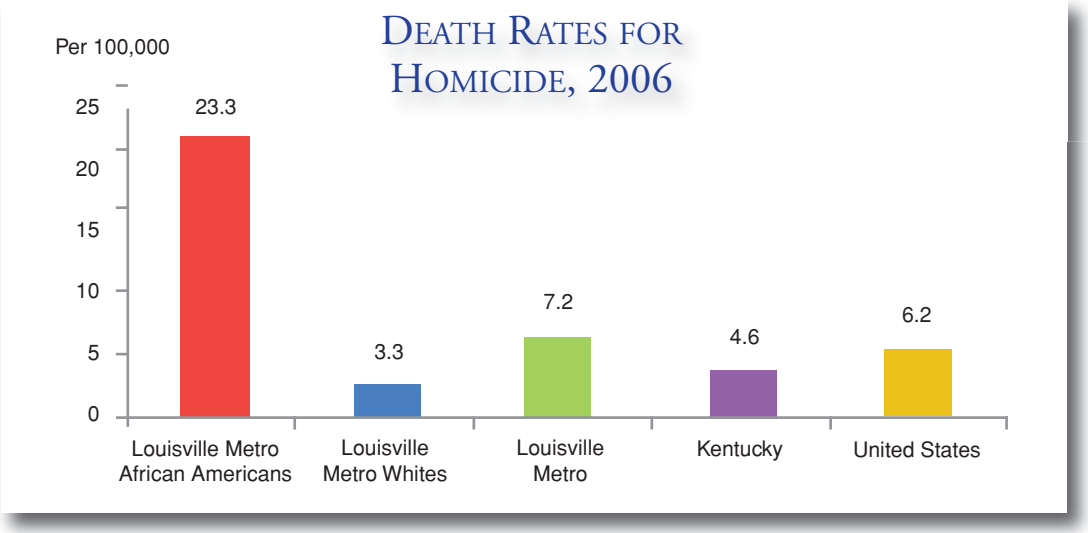
Homicide is the intentional infliction of injury to another person that results in death.[11] For purposes of this document, homicide does not include deaths that result from legal intervention or war operations.

Why is it important?

In 2006, there were 18,573 homicides in the United States, with an age age-adjusted mortality rate of 6.2.[2] Overall, homicide is the fifteenth leading cause of death, but is ranked second for people 15 to 24 years of age.[7] Homicide rates has had a debilitating effect on communities of color and the nation as a whole. The homicide death rate for young African American men in the U.S. is three times the rate for Hispanics, who has the next highest homicide mortality rate.[13]

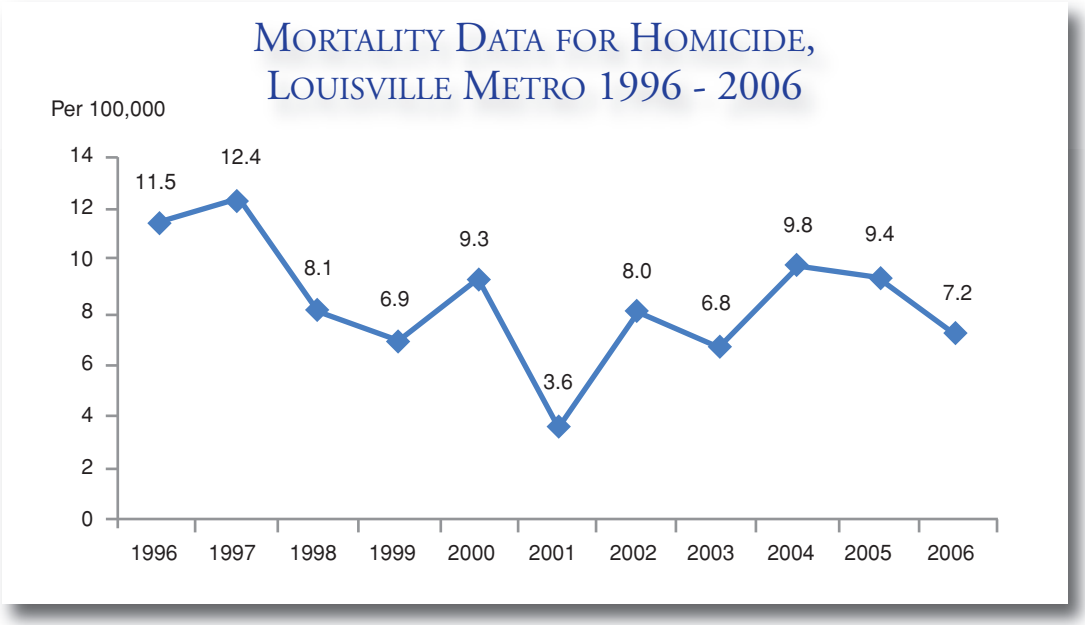
What is Louisville Metro's status?

In 2006, the Louisville Metro age-adjusted mortality rate from homicide of 7.2 deaths per 100,000 population was higher than both the state (4.6) and national rates (6.2). The Louisville Metro rate was more than double the Healthy People 2010 goal of 3.0 per 100,000 population.[5] For Louisville Metro African Americans, the age-adjusted death rate from homicide was 23.3 per 100,000 population, which was approximately seven times higher than the rate for Louisville Metro Whites.



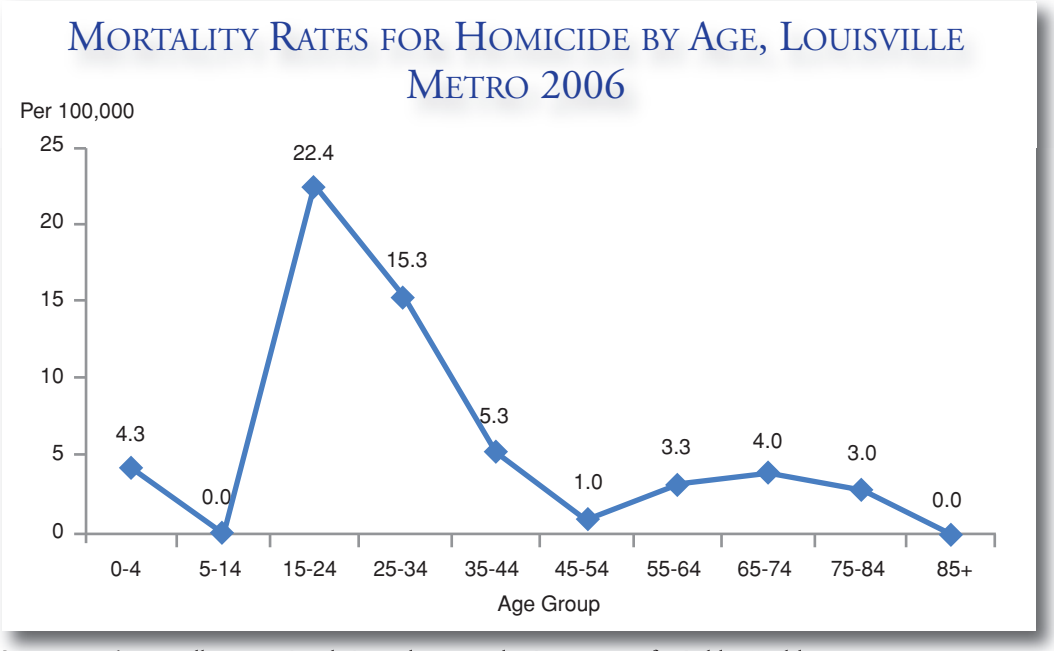
Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

From 1996-2006, homicide death rates have ranged from 3.6 to 12.4 per 100,000 population. Overall, there has not been a consistent trend over time.



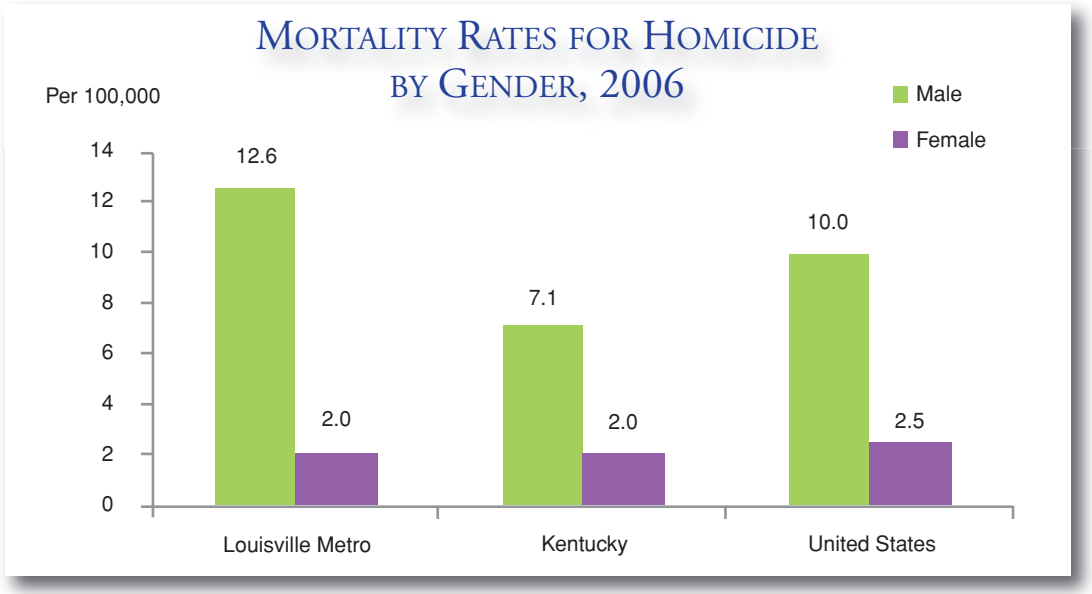
Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

In 2006, the Louisville Metro age-specific mortality rates from homicide were highest for the age groups of 15 to 24 years and 25 to 34 years of age in 2006.



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health

In 2006, the Louisville Metro age-adjusted homicide death rate for males was more than six times that for females. Kentucky and United States age-adjusted homicide mortality rates for males was more than three times that for females.[2, 6]



Source: 2006 Louisville Metro Death Records, Kentucky Department for Public Health; National Center for Health Statistics

What are we doing?

The Louisville Metro Department of Planning and Design Services Bicycle and Pedestrian Coordinator who oversees programs and projects related to active transportation, all of which promote education, engineering changes, and enforcement of laws related to bicycle and pedestrian travel and safety. Bike Louisville and Step Up Louisville, two task forces formed following the Bike and Pedestrian Summits in 2008 and 2009, are organized into working subcommittees around the five E's: Education, Encouragement, Engineering, Evaluation and Enforcement. Each group carries out specific goals and objectives identified as priorities at the respective summits. From these goals and other input, the Bicycle and Pedestrian Coordinator is developing Bike and Pedestrian Master Plans to serve as roadmaps for improving bicycling and walking in Louisville Metro.

The Bike and Pedestrian Coordinator is a member of the Mayor's Healthy Hometown Movement's Active Living Committee, where Bike Louisville and Step Up Louisville report out on a regular basis. The Mayor's Healthy Hometown Movement promotes bicycling and walking for transportation or leisure as ways to keep healthy and avoid being overweight or obese. This Movement increases awareness of behavioral health risk factors and encourages healthy eating and physical activity.

In 2009, LMPHW partnered with the Mayor's Communications Office, TARC, and Public Works and Assets to produce StreetSense, a multi-phased awareness and education campaign to make our streets safer for cyclists and pedestrians by educating all users on the rules of the road and encourage motorists to share the road. For more information, visit www.louisvilleky.gov/streetsense.

LMPHW's Center for Health Equity is part of the West Louisville Vision Project which began in 2006 as a way to bring together individuals & organizations that were interested in and concerned about the West Louisville community. The goal of the project is to create long-term solutions to West Louisville's many challenges based on relationships between residents and community leaders, non-profit organizations, public officials, the private sector, and faith-based leaders. The original action groups voted by the West Louisville Vision group in January 2007 are Youth, Crime, Community Involvement, Economic Development, and Health Care.

What else do we need to do?

- Continue to work with the members of the Mayor's Healthy Hometown Active Living Committee to promote education and enforcement regarding safety for pedestrians and bicyclists.
- Promote "Street Sense" and other safety campaigns at related events, like Mayor's Hike & Bike and Second Sunday.
- Support Bike to Work Day with educational and social marketing focus.
- Promote violence prevention to help ensure livable communities and continue to raise public awareness regarding the linkages between violence and health status of a community.
- Strengthen policy development addressing root causes of violence in Louisville Metro and advocate for policies that will reduce intentional injuries in our community, including domestic violence, homicide and suicide.

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Lead *Exposure*

What is it?

Childhood Lead Poisoning (CLP) remains one of the major public health problems in the United States today.[1] Most cases of CLP in the United States are related to the ingestion of lead through contaminated house dust by way of hand to mouth activity and oral behaviors in young children.[6] Children six years old and under are most at risk from the harmful effects of lead poisoning because their bodies are growing quickly and lead is easily absorbed into their growing bodies.

Why is it important?

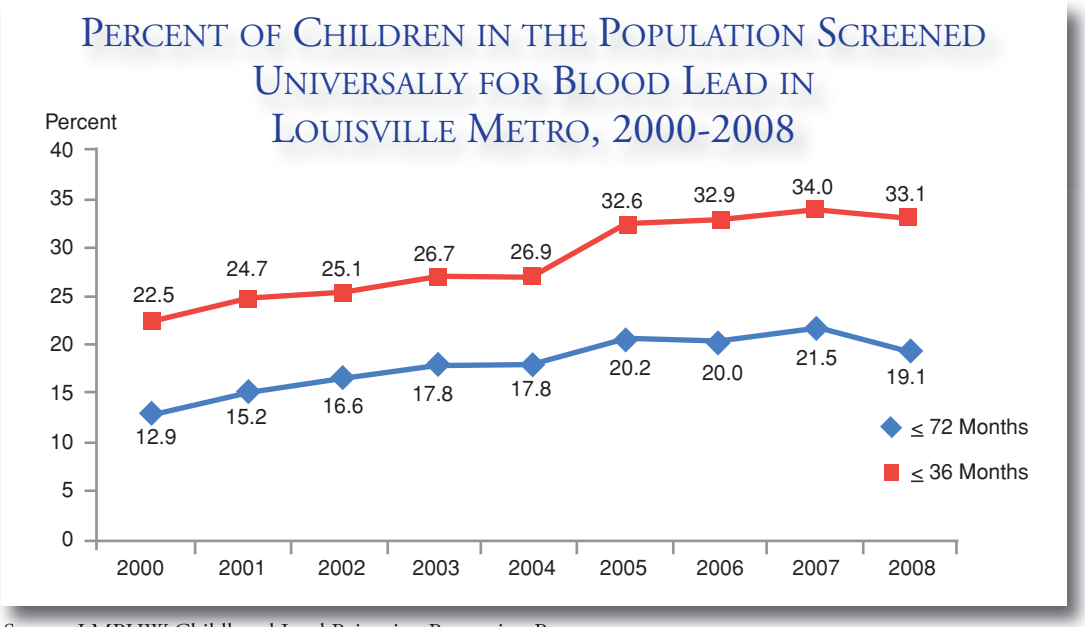
Blood lead levels (BLLs) greater than or equal to 10 micrograms of lead per deciliter of blood (µg/dL) are associated with adverse effects in children, including abnormal cognitive development, behavior problems, decreased intelligence, and poor school performance.[7]

In 1997, the CDC proposed new guidelines recommending state and local health officials target their efforts to children who live in older homes and children from low-income families, including children who receive Medicaid benefits.[8] Although young children living in poverty are at a higher risk for elevated BLLs, lead poisoning is an issue that crosses all socioeconomic groups, geographic locations, racial and ethnic populations.

What is Metro Louisville's status?

Louisville Metro Public Health and Wellness' Childhood Lead Poisoning Prevention Program (CLPPP) continues to provide universal and targeted screening. In 2008, about 10,870 children were screened.

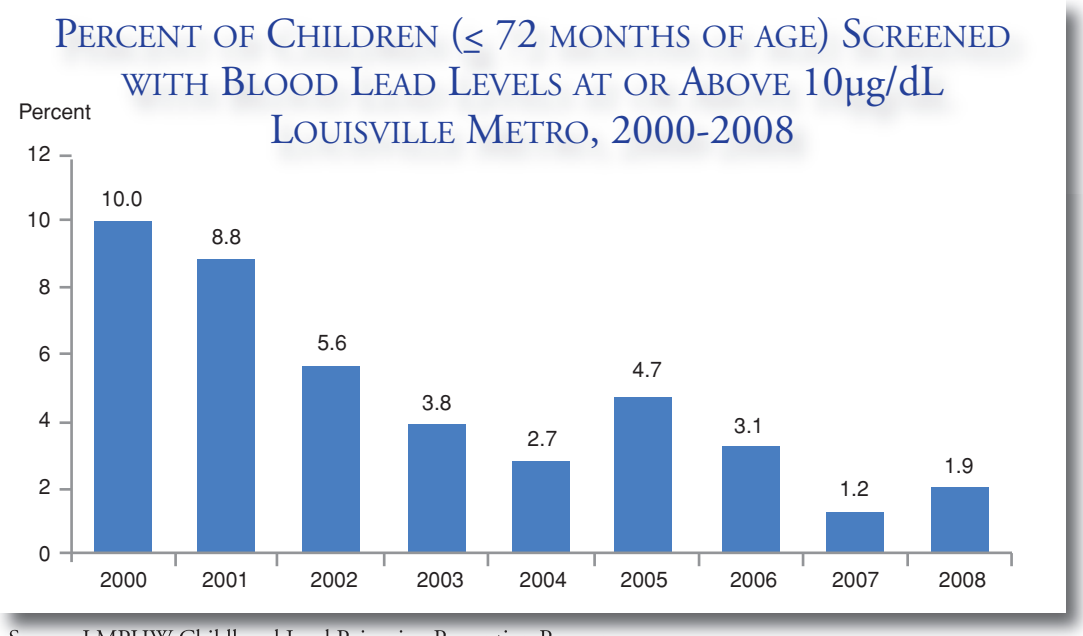
The following graph shows the percent of children screened with a blood lead test in Louisville. The chart reflects two age groups; the red line represents children equal to or less than 36 months of age, while the blue line represents all children 72 months of age and younger. The percent of children screened steadily increased from 2000-2007, but slightly decreased in 2008.



Source: LMPHW Childhood Lead Poisoning Prevention Program

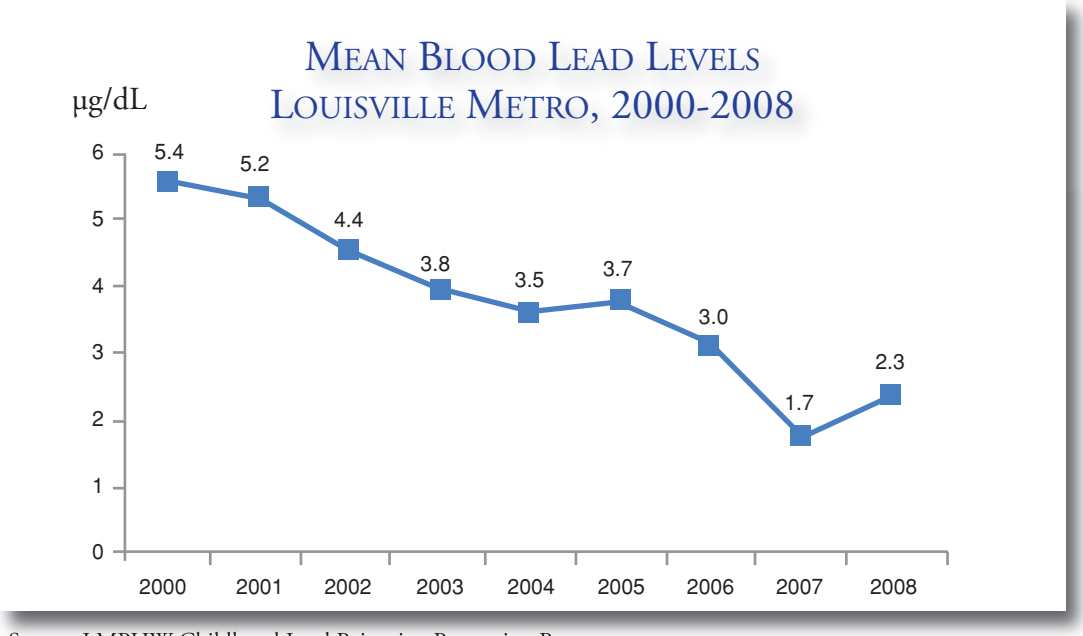
The percentage of children screened with elevated blood lead levels (EBLL) equal to or greater than 10 µg/dL decreased from 10% in 2000 to 2.7% in 2004. The decline can be attributed to the inclusion of private laboratory screening results in 2001, combined with the LMPHW laboratory results. This collaboration has allowed the LMPHW CLPPP to gain better assessment of the community and the number of children with blood lead levels at or above 10 µg/dL.

An increase occurred in 2005, with 4.7% of the children exhibiting elevated blood lead levels equal or greater than 10µg/dL. The increase in 2005 may be attributed to CLPPP's greater emphasis on screening Head Start children, new immigrants and the refugee population in all of Louisville. The percentage declined from 2006-2007 and then increased slightly to 1.9% in 2008.



Source: LMPHW Childhood Lead Poisoning Prevention Program

The mean blood lead levels for children equal to or less than 72 months in Louisville have consistently declined since 2000. However, slight increases occurred in 2005 and 2008.



Source: LMPHW Childhood Lead Poisoning Prevention Program

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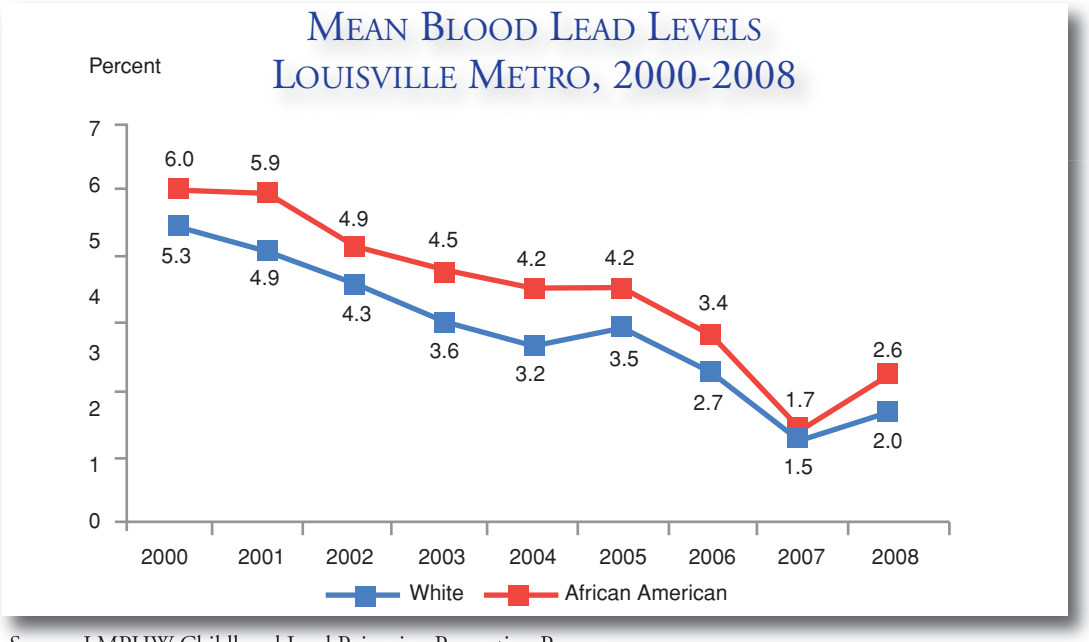
African American children are disproportionately affected by lead exposure.[11] The mean blood lead levels for African Americans have been consistently higher than that of Whites. The graph below displays the mean blood lead levels for both African American and White children in Louisville Metro from 2000 to 2008. While both races have seen a steady decline in the mean blood lead levels over the past several years, the levels increased last year to 2.6% for African Americans and 2.0% for Whites.

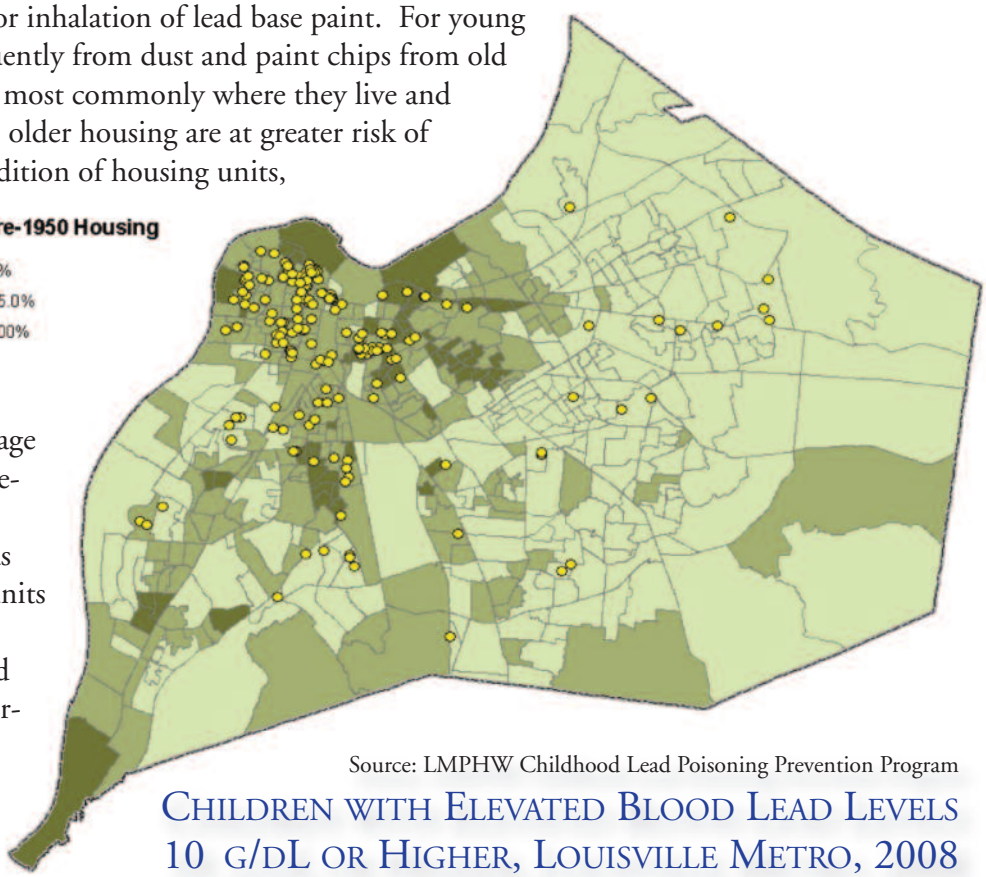
MEAN BLOOD LEAD LEVELS LOUISVILLE METRO, 2000-2008



Source: LMPHW Childhood Lead Poisoning Prevention Program

Lead poisoning is a result of ingestion or inhalation of lead base paint. For young children, exposure to lead is most frequently from dust and paint chips from old surfaces painted with lead-based paint, most commonly where they live and play. Therefore, children who reside in older housing are at greater risk of becoming lead poisoned. Age and condition of housing units, not the geographic location, are the most important predictors for the presence of hazards related to lead-based paint.

The following map depicts the percentage of existing housing units constructed before 1950 (when paint had the highest lead content). The lightest shaded areas indicate that 0-26.0% of the housing units were built prior to 1950; the medium shaded areas represent 26.1-75.0%; and the darkest areas indicate that the majority of housing units (75.1-100%) were constructed pre-1950. The map also depicts children with blood lead levels 10 µg/dL or higher, represented by the yellow dots.



Source: LMPHW Childhood Lead Poisoning Prevention Program

CHILDREN WITH ELEVATED BLOOD LEAD LEVELS 10 G/DL OR HIGHER, LOUISVILLE METRO, 2008

What are we doing?

The Louisville Metro Department of Public Health and Wellness's Childhood Lead Poisoning Prevention Program (CLPPP) has been providing blood lead screening, case management, health education and awareness, and environmental intervention in our community to reduce exposure to lead and create a lead safe Louisville since 1968.

CLPPP has partnered with several community agencies in addressing the lead problem. Through the Lead Safe Neighborhood project, CLPPP works with the Department of Housing and Urban Development (HUD) in remediation of houses identified to have lead hazards through our risk assessment and lead inspections. CLPPP conducted an outreach campaign in conjunction with the Louisville Lead-Safe Coalition and HUD to observe National Lead Poisoning Prevention Awareness week in October last year. CLPPP also works with the Louisville Metro Department of Inspections, Permits, and Licenses and the Louisville Housing Authority in this effort to reduce lead exposure in Louisville Metro.

As part of CLPPP's emphasis on primary prevention, the year round health education activities not only highlight universal precautions to deal with lead-based paint, but also educate our citizens about non-paint lead sources like industrial and occupation exposures, consumer goods, hobbies, and home remedies.

CLPPP has expanded lead safety education to expectant and new parents. They provide these parents with information on lead poisoning, control of lead hazards, local lead safety resources and community groups, screening recommendations, and cleaning equipment.

To get a broader picture of blood lead screening in Louisville Metro, CLPPP communicates with University of Louisville (U of L), Department of Pharmacology and Toxicology, regarding data and surveillance information. The data presented in this report for Louisville Metro childhood blood lead screening status combine the data from CLPPP and U of L.

The Childhood Lead Poisoning Program also actively participates in the Kentucky Statewide Childhood Lead Poisoning Prevention Advisory Committee to implement a statewide childhood lead poisoning strategic elimination plan.

What else we need to do?

LMDPHW CLPPP developed a **Childhood Lead Poisoning Elimination Plan** similar to the goals of Healthy People 2010: to eliminate elevated blood lead levels (those greater than or equal to 10 mg/dL) in children by 2010.

It is essential to increase primary prevention activities to successfully eliminate childhood lead poisoning. To this end, CLPPP will address housing and non-housing sources of lead exposure in its outreach campaigns, involve and seek more support from a broader group of partners who care for children and the environment in which children live, and identify and address geographic, socio-economic, and cultural factors that increase the risk of exposure to lead. Legislation strengthening lead regulation will boost this effort.

CLPPP needs to reach out to providers not currently performing BLL testing and advise them to test and also provide them with information regarding the LMDPHW lab services as a resource for testing samples. A mandatory testing requirement of children at one year and at two years of age and the reporting of all lead test results to the state will help.

CLPPP needs to increase its collaboration with agencies like Passport Health Plan to coordinate for outreach to Medicaid recipients and Medicaid providers in Louisville Metro targeting the highest concentration of Medicaid-eligible population. The program will also collaborate with the Kentucky State CLPPP to develop program management and evaluation reports, including tracking of the Medicaid population on a quarterly basis.

CLPPP is addressing the growing lead poisoning problem among refugees in the Louisville Metro area. Working with representatives from Catholic Charities and Kentucky Refugee Ministries, the case management and health education team has screened children from this group and provided some families with follow-up services and educational materials.

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One way to examine the status of a community's health is to look at the incidence (number of new cases reported) of communicable diseases. The table below contains the number of new case reports and the rates per 100,000 population during the year 2007 for selected communicable diseases for Louisville Metro, Kentucky, and the United States. The table includes, for comparison purposes, the rate for state and national goals as defined in the Healthy Kentuckians 20101 and Healthy People 20102 reports respectively, if a goal has been identified.

Communicable Disease Rates, 2007
(Rate = Incidence per 100,000 Population)

	Louisville Metro	Kentucky	U.S.A.	State Goal	U.S.A. Goal
Population Estimates (denominator)	709,264	4,241,474	301,621,157		
AIDS (Rate)	16.5	6.9	12.7	5.4	1.0
AIDS (Case Count)	117	292	38,384		
Primary/Secondary Syphilis (Rate)	3.7	1.3	3.8	0.27	0.2
Primary/Secondary Syphilis (Case Count)	26	56	11,466	0.27	0.2
Gonorrhea (Rate)	232.9	81.3	118.0		
Gonorrhea (Case Count)	1,652	3,449	355,991	55.0	19.0
Chlamydia (Rate)	367.7	207.4	367.5		
Chlamydia (Case Count)	2,608	8,798	1,108,374	140.0	NRG
Tuberculosis (Rate)	4.7	2.8	4.4		
Tuberculosis (Case Count)	33	120	13,299	1.0	1.0
Pertussis (Rate)	1.8	0.8	3.5		
Pertussis (Case Count)	13	33	10,454	NRG	NRG
Measles (Rate)	0.0	0	0.01		
Measles (Case Count)	0	0	43	0.0	0.0

NRG = No Related Goal
State Goal from Healthy Kentuckians 2010
U.S.A. Goal from Healthy People 2010
The AIDS case count for 2007 is provisional due to reporting delays and is subject to change

AIDS

What is it?

Acquired Immunodeficiency Syndrome (AIDS) is the most advanced stage of illness that occurs following infection with the human immunodeficiency virus (HIV). HIV infection progressively destroys a body's ability to protect itself from infection. A person with HIV infection is diagnosed as having AIDS when their body produces abnormally low numbers of white blood cells. A person with AIDS thus becomes ill with opportunistic infections that normally do not affect healthy people.

HIV is transmitted from person to person through contact with body fluids, including blood, semen, vaginal secretions, and breast milk. The most common behaviors associated with a risk for infection (modes of exposure) are sexual contact with or sharing needles or syringes used by HIV infected people. HIV can also be transmitted from women to their babies during pregnancy, delivery, or through breast-feeding.

Why is it important?

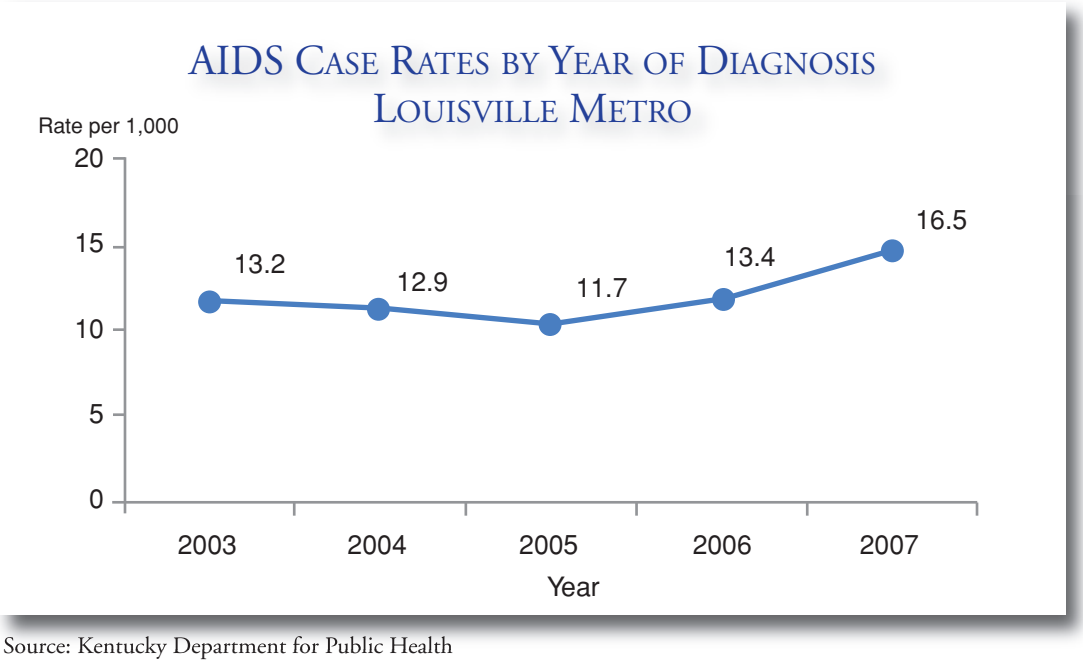
HIV is a life-threatening illness with millions of new cases reported worldwide each year. There is no cure for HIV/AIDS and no vaccine to prevent HIV infection. Antiretroviral medications can prevent the worsening of the disease, but these therapies do not cure the infection and can have severe side effects.

Communities monitor the rate of new HIV infection and the rate of new AIDS cases. Information gathered from HIV or AIDS positive individuals has been used to identify behaviors that place people at risk for the HIV infection. From looking at the data, we now know sexual activity and sharing needles or syringes are common methods by which the disease is spread.

Since AIDS follows HIV infection, the number of new AIDS cases diagnosed in members of a community can be used as an indirect measure of HIV infection. However, the most sensitive measure of the rate of new HIV cases is a count of those individuals who are newly diagnosed with HIV infection. The first full year of confidential name-based HIV reporting in Kentucky was 2005. There are too few years of data available for a clear trend to be discovered, but there were 148 new HIV diagnoses in Louisville Metro in 2005, 166 in 2006, and 188 in 2007. Therefore, the number of new HIV cases in Louisville appears to be increasing. That observation is given additional weight by the fact that the number of new HIV cases in Kentucky decreased from 347 in 2006 to 218 in 2007. Since there aren't many years of HIV data available, Louisville Metro Public Health and Wellness used newly diagnosed AIDS cases as a measure of HIV infection in the community.

What is Louisville Metro's status?

There are substantial reporting delays associated with an AIDS diagnosis. The case count reported for 2007 is provisional due to those reporting delays and is subject to change. AIDS incidence rates have remained relatively constant from 2003 to 2006 with rates around 12 or 13 per 100,000 persons. The 2007 rate increased to 16.5, which is more than three times the goal of Healthy Kentuckians 2010 (5.4 per 100,000 persons)1, and is more than 16 times the goal of Healthy People 2010 (1 per 100,000). [2]

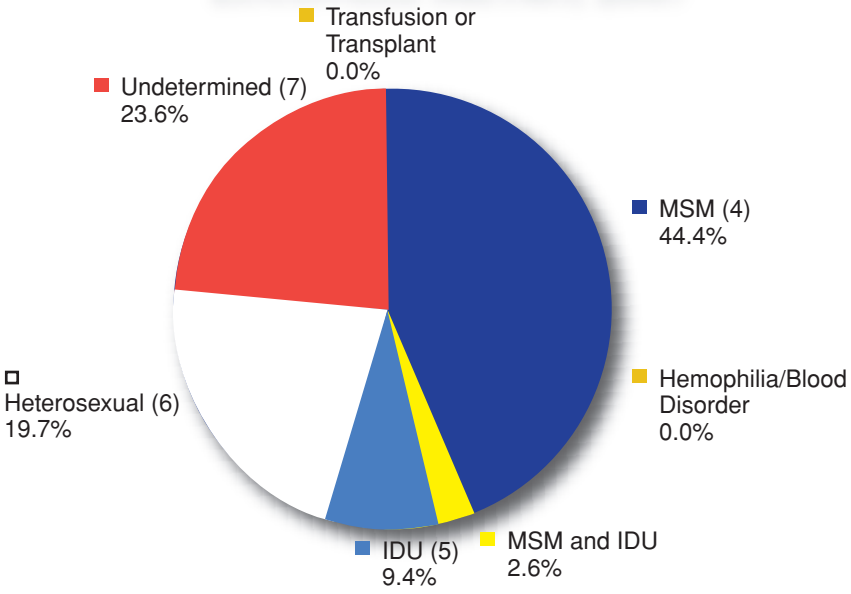


Source: Kentucky Department for Public Health

A change in AIDS case rate could be caused by a change in the number of new people in the community who have HIV infection, since HIV infection is a prerequisite for AIDS. It could also be influenced by the relative effectiveness of antiretroviral therapy. In the absence of named HIV reporting, we cannot distinguish between those two potential causes for changes in the rate.

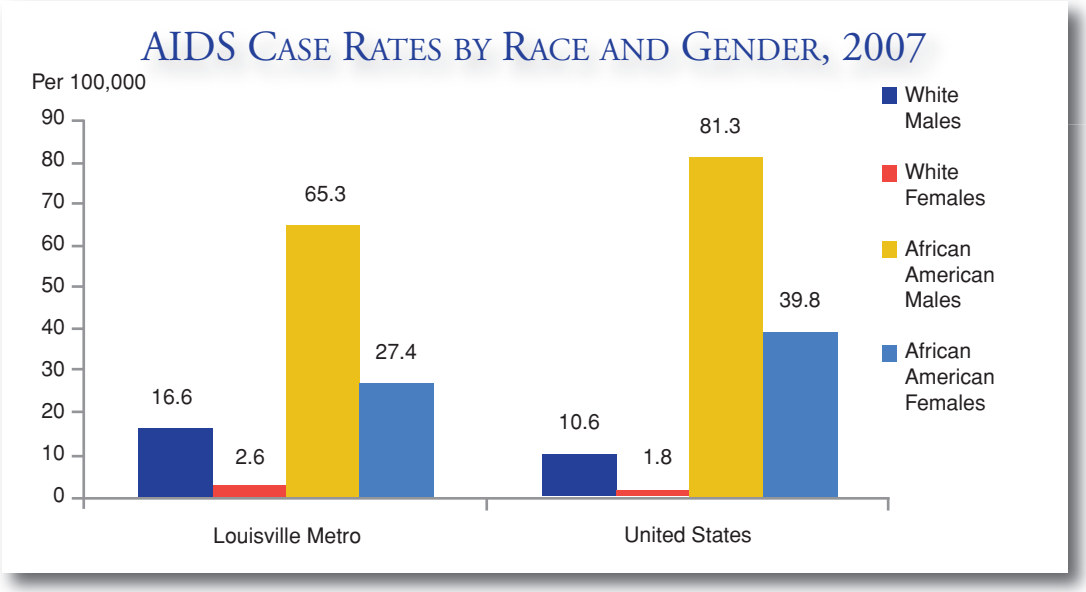
Of the total number of new AIDS cases diagnosed in 2007, men who have sex with men (MSM) was the predominant mode of exposure (44.4%), followed by heterosexual contact with HIV-infected individuals (19.7%), and injection drug use (IDU) at 9.4%. Approximately 23.9% of the new AIDS cases indicated no behaviors that placed them at risk for HIV infection, while 2.6% indicated they had multiple modes of exposure (MSM and IDU).[3]

AIDS Mode of Exposure Louisville Metro, 2007



When examining reported cases of AIDS in the United States, African Americans have a higher rate than Whites. The rate of new AIDS cases reported in 2007 for Louisville Metro White males and females were similar to, but higher than, national rates. Although lower than the national rates for African Americans, Louisville Metro African American rates were higher than those for Louisville Metro Whites.[3, 4] The disparity that exists in AIDS incidence rates in Whites versus African Americans, seen at the national level, exists in Louisville Metro as well, but the magnitude of the disparity appears to be smaller locally.

AIDS Case Rates by Race and Gender, 2007



Primary and Secondary Syphilis

What is it?

Syphilis is a sexually transmitted disease caused by the Treponema pallidum bacterium. The organism is transmitted from an infected individual when one has direct contact with an infected person's sores. The sores can be found on the external genitals, the vagina, anus, rectum, mouth, or lips. Unprotected anal, oral, or vaginal sex with an infected individual is a mode of exposure for syphilis. In addition, pregnant infected women can transmit the disease to their babies.

Primary and secondary syphilis cases represent individuals recently infected with syphilis who are capable of transmitting the disease to uninfected people.

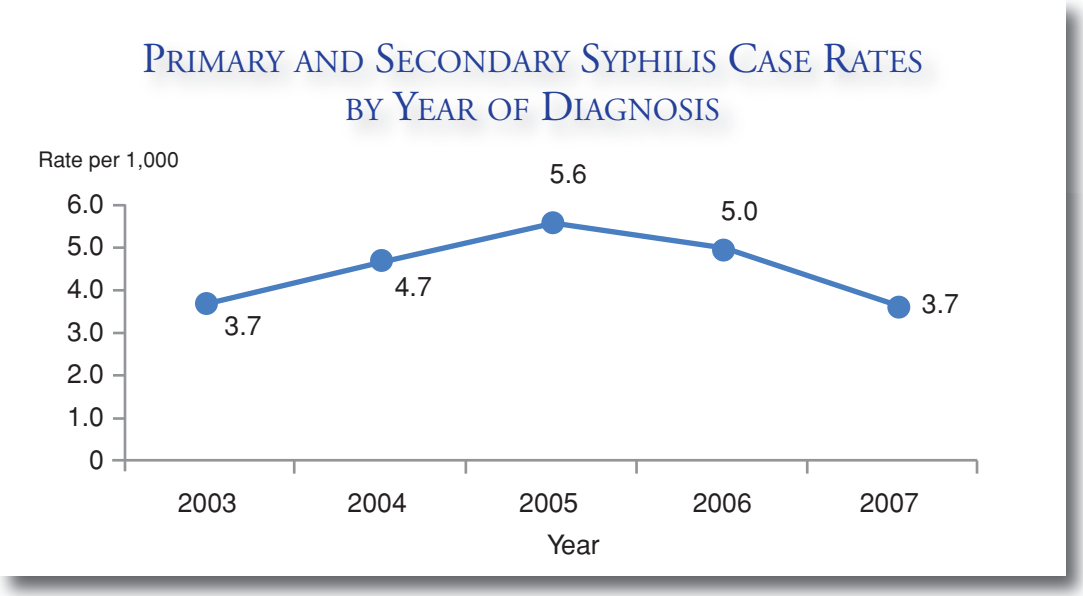
Why is it important?

Syphilis is a sexually transmitted disease that has resulted in devastating epidemics. If the disease is untreated, the signs and symptoms that can develop as a result of a late stage of syphilis infection include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, dementia, even death.

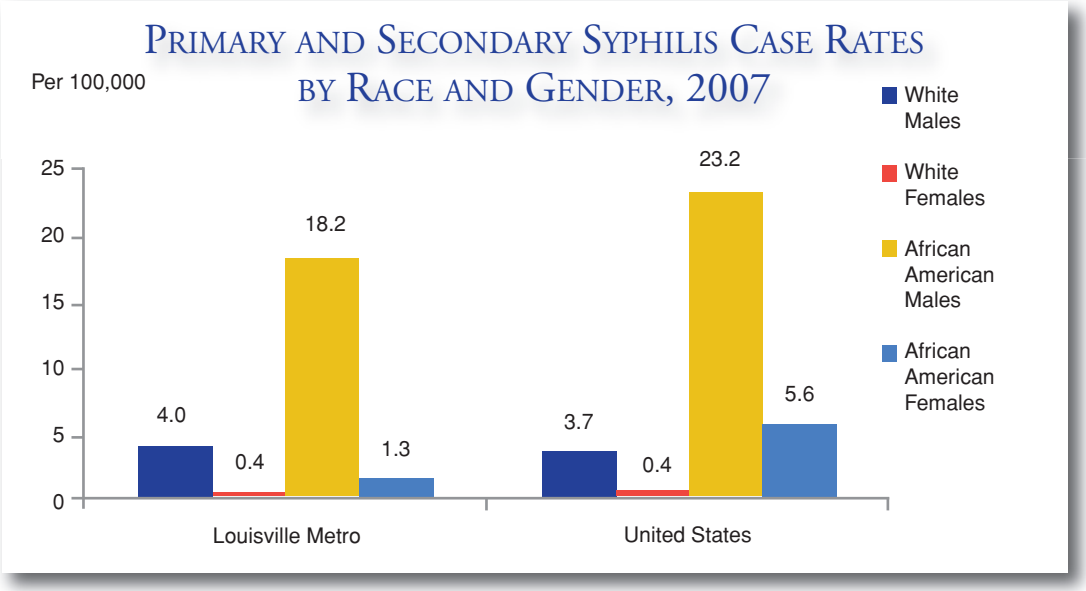
What is Louisville Metro's status?

The rate of new primary and secondary syphilis cases in a community is an important health status indicator. The number of new cases of primary and secondary syphilis in our community decreased from 35 cases in 2006 to 26 cases (3.7 per 100,000 population) in 2007.[5]

Although the rate of new primary and secondary syphilis cases in our community is as low as it has been in the past 5 years, it is more than 10 times higher than the goal of Healthy Kentuckians 2010 (0.27 per 100,000)[1] and Healthy People 2010 (0.2).[2] The rate for primary and secondary syphilis in 2007 in Louisville Metro was essentially the same as the rate in the United States and almost three times the rate seen in Kentucky as a whole.



Nationally during 2007 the rates of reported cases for African Americans males and females were higher than the rates seen in White males and females. In Louisville similar patterns were seen, but the rates for White males were higher than national rates for White males and local African American females had rates less than African American females nationally.[5, 6] The larger than expected number of cases among Louisville Metro males, both white and African American, can be explained, in part, by a larger increase in the number of cases seen in the MSM demographic in 2007.



Chlamydia

What is it?

Chlamydial infections are the most common reportable disease in the United States. These infections are caused by the Chlamydia trachomatis bacterium. Approximately 50% of infections in men and 75% in women did not involve obvious symptoms in the early stages. Individuals in the 15 to 24 year age group show the highest rates of infection.

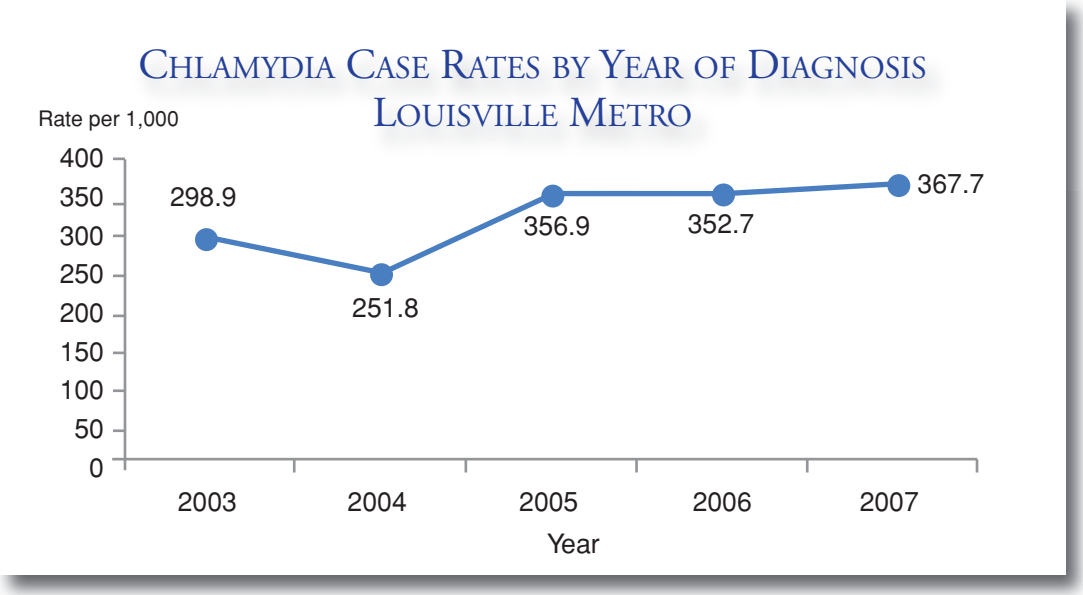
Why is it important?

In women, chlamydial infections may result in pelvic inflammatory disease which can lead to infertility, ectopic pregnancy, and chronic pelvic pain. As with other inflammatory, sexually transmitted diseases, chlamydial infections can increase the transmission of HIV infection. In addition, pregnant women infected with chlamydia can pass the infection to their infants during delivery, causing eye infections and pneumonia.

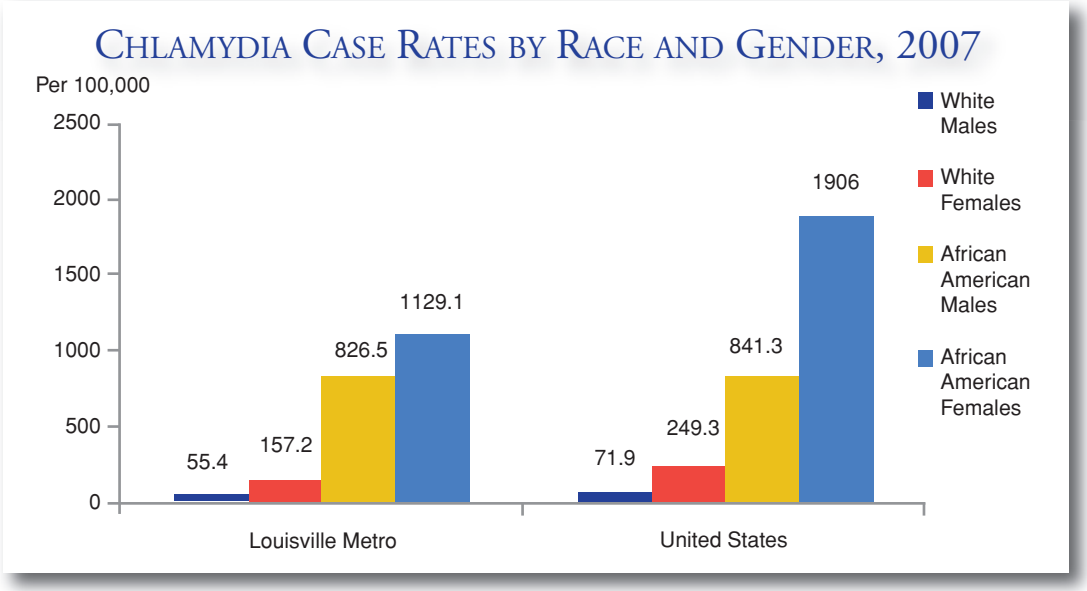
Nationally, rates of chlamydial infection increased in both men and women during the 1990s. This probably reflects an increase in the number of screening programs, sensitivity of the tests used to detect infection, and an emphasis on reporting by health care providers and laboratories. Although increases in rates of new infection were reported, the Centers for Disease Control and Prevention (CDC) still believe the disease is under-reported.

What is Louisville Metro's status?

The number of new chlamydial infections per 100,000 population in Louisville Metro was essentially unchanged in 2007 (367.7 per 100,000) compared to 2006 (352.7 per 100,000).[5] The number of cases reported in our community may reflect the intensity of our screening programs and the reporting of health professionals, rather than a true count of chlamydial infections. The rate of new chlamydial infections seen in Louisville Metro for 2007 (367.7 per 100,000) was higher than the rate seen in Kentucky (approximately 207 per 100,000) and equal to national rate (approximately 367 per 100,000).



When examining reported cases of chlamydia, African Americans have higher rates than Whites and females show higher rates than males at both the local and national level. Rates in each of the race/gender groups were lower in Louisville Metro than the rates for the corresponding group in the U.S. as a whole. [5, 6]



Gonorrhea

What is it?

Gonorrhea is a sexually transmitted disease caused by the Neisseria gonorrhoeae bacterium. Neisseria gonorrhoeae can live and grow in parts of a male's or female's reproductive tract, anus, rectum, mouth, or eyes.

Why is it important?

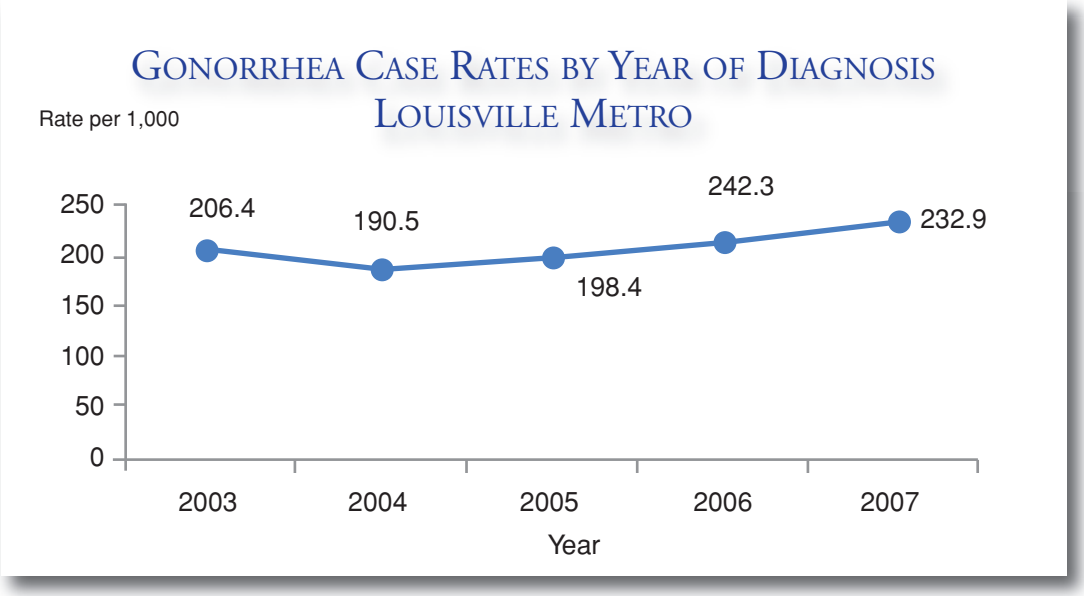
Like chlamydial infections, gonorrhea is a cause of pelvic inflammatory disease in women, a major cause of infertility, ectopic pregnancy, and chronic pelvic pain. It can also be transmitted from mother to child during pregnancy. In men, gonorrhea infections can produce painful testicular infections that can lead to infertility.

In both men and women gonorrhea can also facilitate the transmission of HIV infection. It occasionally spreads to a person's blood or joints and becomes a life-threatening infection.

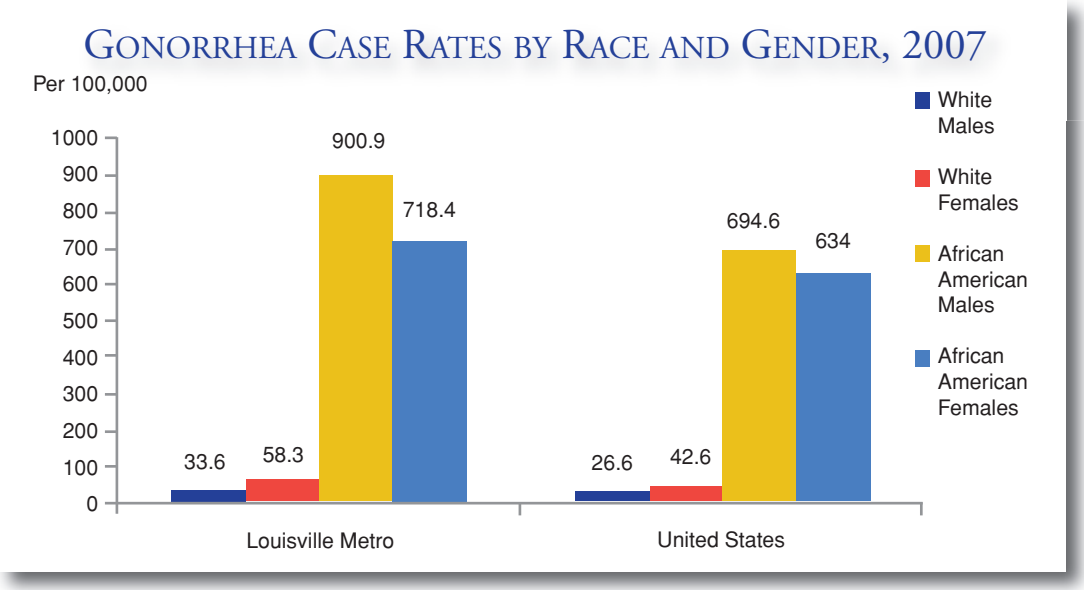
What is Louisville Metro's status?

Nationally, the reported rate for gonorrhea in 2007 was essentially unchanged from the previous year - 120 new cases per 100,000 population in 2006 to 118 per 100,000 in 2007. The number of new gonorrhea cases per 100,000 population in Louisville Metro has increases steadily over the past 4 years and, in 2007, the rate is higher than any of the last 5.5 As is the case with chlamydial infections, the reports of gonorrhea in the community are influenced by many factors in addition to the actual incidence of the disease in the community.

The rate of new gonorrhea cases seen in 2007 (232.9 per 100,000) in Louisville Metro was almost three times greater than the rate seen in Kentucky and more than 10 times greater than the national Healthy People 2010 goal of 19 per 100,000 population. Overall rates for gonorrhea in 2007 are almost two times higher for Louisville Metro as compared to the nation.



The distribution of gonorrhea cases during 2007 by race and gender in Louisville Metro follows the pattern seen nationally, with rates much higher in African Americans than in Whites. Gonorrhea incidence rates for all race/gender combinations are higher locally than they are nationally.[5, 6]



Tuberculosis

What is it?

Tuberculosis (TB) is a disease caused by the Mycobacterium tuberculosis bacterium. The bacteria can infect any part of the body, but they are commonly found in the lungs. TB can be spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs or sneezes. People who are physically close to the infected individual may breathe in these bacteria and become infected.

Why is it important?

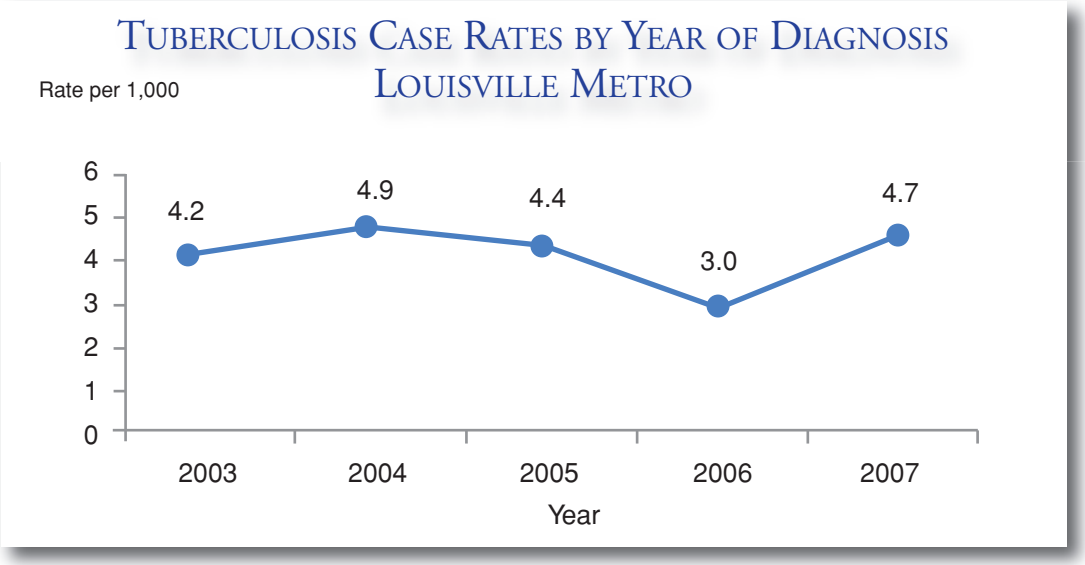
TB was once the leading cause of death in the United States. Although TB case rates declined after World War II, they increased, nationally, between 1985 and 1992. National TB case rates have been declining since then, but there were still more than 13,000 cases in the United States in 2007.

What is Louisville Metro's status?

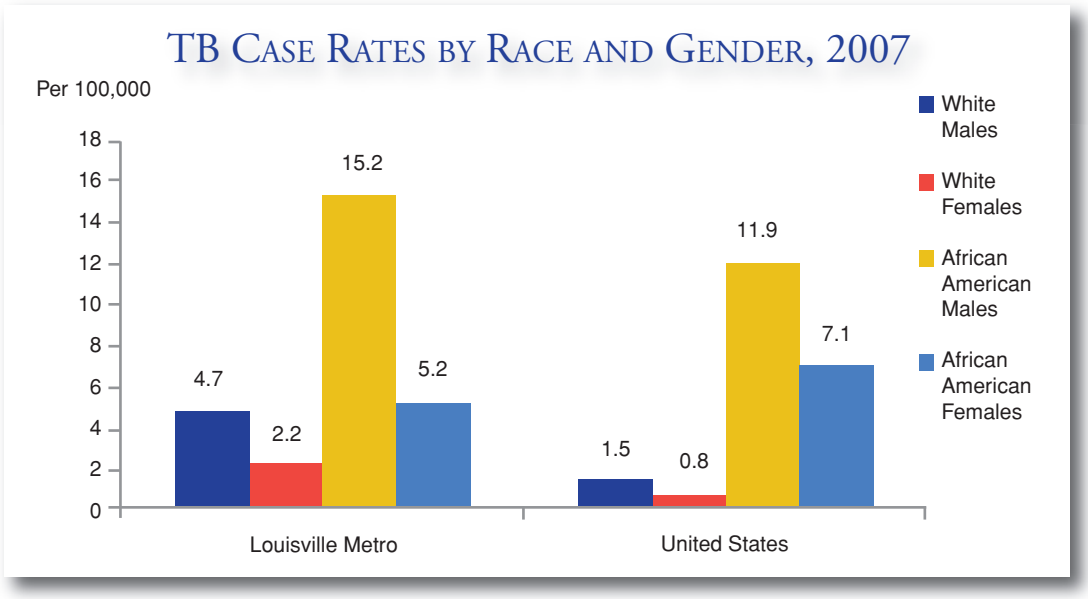
Although nationally active TB case rates have fallen since the CDC started monitoring them, TB cases continue to be reported in the United States and the national rate of new active TB infections for 2007 was 4.4 per 100,000 population.

The rate of new cases of TB in Louisville Metro has fluctuated over the past five years and, after a two year period of decline, it has rebounded in 2007 to the second highest rate seen during that time interval.[7]

The local case rate (4.7 per 100,000) was higher than the rate seen for the state and slightly more than the national rate. The rate of new TB cases in Louisville Metro for 2007 was almost five times higher than the goal of one (1) new case per 100,000 persons set by the Healthy Kentuckians 2010 and Healthy People 2010 reports.



Case rates in 2007 for Louisville Metro were higher for African American males, White males, and White females compared to national rates. Although African Americans have more cases of TB than would be predicted based on their population counts at a national and local level, the disparity between African Americans and Whites is smaller in Louisville Metro than it is in the country as a whole and TB rates among African Americans in Louisville Metro are less than those seen nationally.[7, 8]



Measles

What is it?

Measles is a highly contagious respiratory disease caused by a virus. Symptoms include rash, high fever, runny nose, and eyes.

Why is it important?

Before 1963, there were an average of 3 to 4 million cases and 450 deaths caused by measles in the United States each year. In addition to death, other complications following measles infection include encephalitis (inflammation of the brain), which can lead to deafness; mental retardation; or miscarriage, premature birth, and birth of low weight babies in pregnant women who are infected.

What is Louisville Metro's status?

Although there were 43 cases of measles in the United States (14 indigenous and 29 imported), no new cases were reported in Louisville Metro or Kentucky in 2007.[9, 10] In the past five years Louisville Metro has not recorded any new cases of measles. The last local measles reports were two cases in 1999. A nearly universal childhood vaccination program using a very effective vaccine coupled with effective reporting and surveillance programs have contributed to this very low new case rate.

Pertussis

What is it?

Pertussis (Whooping Cough) is a highly contagious respiratory infection caused by the Bordetella pertussis bacterium. Symptoms often last for many weeks and in young children may include severe bouts of coughing with a "whooping" sound as the child tries to inhale between coughs. The child may vomit after a coughing spasm. Symptoms in adolescents and adults may not be as severe as they are in young children.

Why is it important?

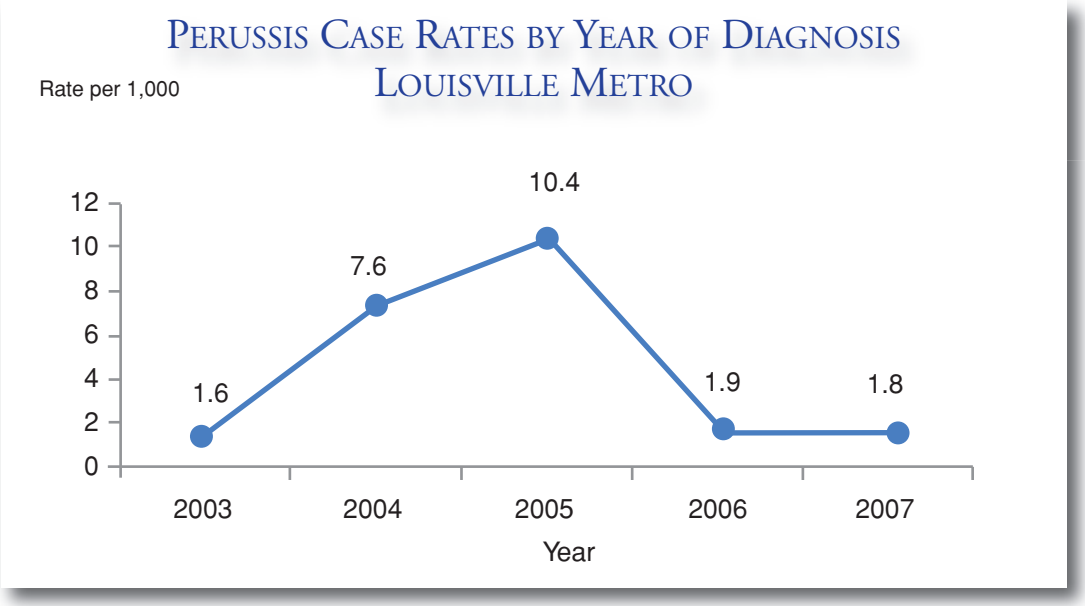
Complications resulting from the initial infection can occur (particularly in young children) and may be life threatening. Immunization can prevent, or at least reduce the severity of, the infection. However, children who are too young to be vaccinated or who have started the vaccination series, but have not had the time to develop immunity are at risk for the infection.

What is Louisville Metro's status?

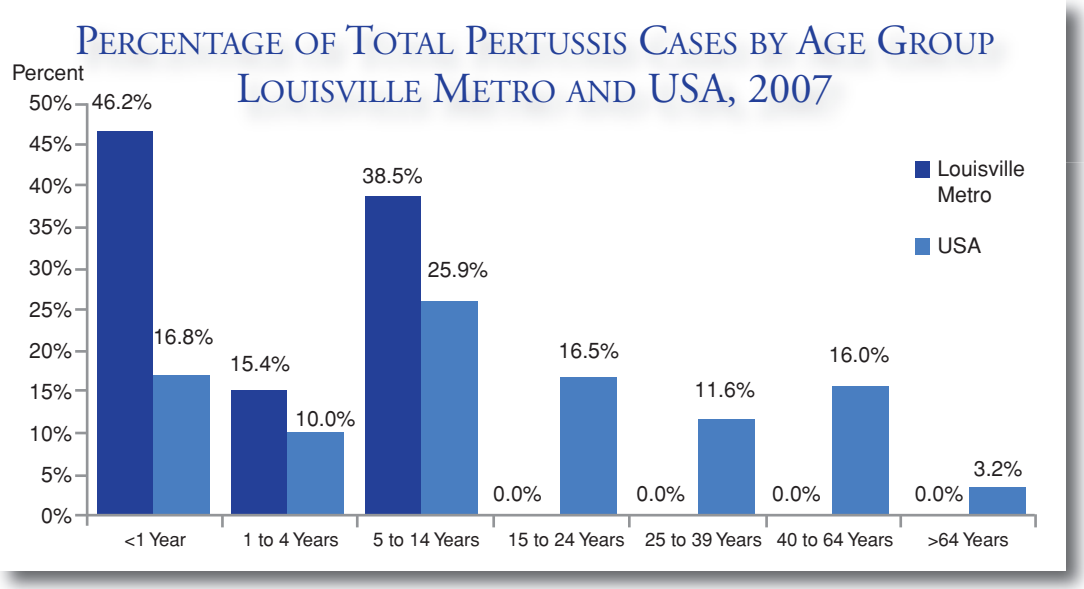
The rate of new pertussis cases per 100,000 population in Louisville Metro has fluctuated over the past five years but, like national trends, has fallen from a peak in 2004 through 2005 to one of the lowest rates in the past 5 years.[9] In 2007 the rate decreased from the 2006 rate of 1.9 cases per 100,000 to 1.8 per 100,000 population.

Although pertussis is a vaccine preventable disease, vaccine-induced immunity decreases 5 to 10 years after the last vaccination. That suggests individuals older than 10 years of age will have diminishing immunity. These older members of the community act as reservoirs for the bacterium responsible for pertussis, and could infect other

individuals in the community who have diminishing immunity or who were never immunized. Adolescents and adults who have pertussis may fail to seek treatment or may not be diagnosed as having pertussis when they do seek treatment. This undiagnosed or untreated pool of pertussis cases contributes to a steady supply of infectious persons in the community who are available to infect other under-immunized or un-immunized individuals.

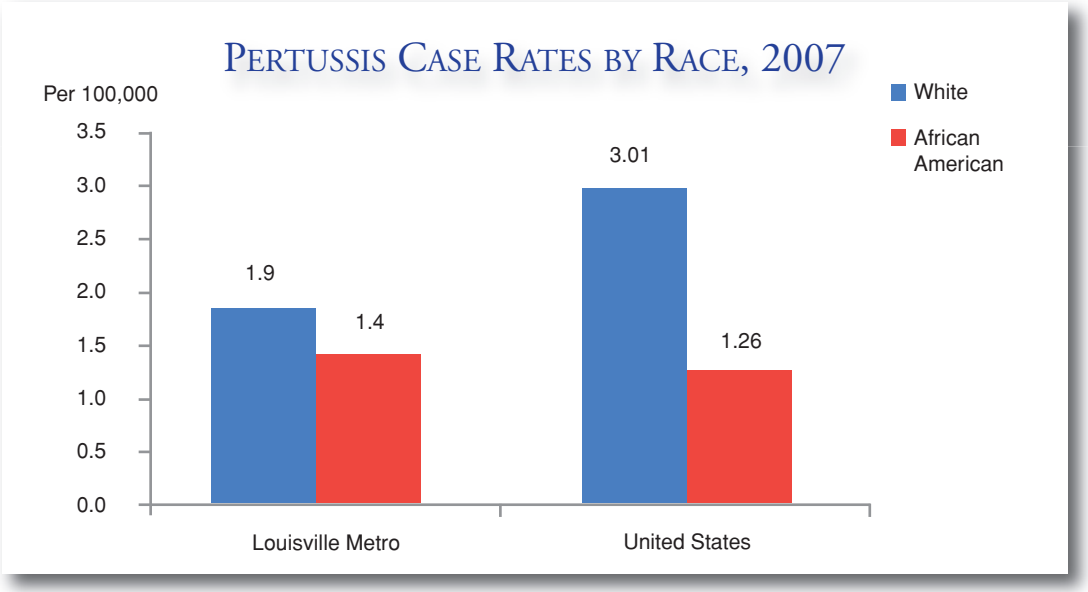


The distribution of the 13 cases of pertussis reported in Louisville Metro during 2007 didn't follow national trends. In Louisville the largest percentage of cases fell in the less than one year age group; this portion of the community is at higher risk for infection because it contains incompletely immunized and un-immunized individuals. A slightly larger than expected percentage appeared in the 1 to 4 year age group and a larger than expected percentage appeared in the 15 to 24 year olds, compared to national percentages. The low total case count makes comparisons with national percentages difficult. A single case added to or subtracted from an age category can alter the percentage of cases by age group.



Louisville Metro is fortunate to have a children's hospital in the community that has been a pioneer in the screening and diagnosis of pertussis cases in their patient population. The exceptional surveillance and reporting from that hospital could help to explain the unexpectedly large number of pertussis cases, compared to other, older, age groups reported in children less than one year of age through 14 years of age seen in Louisville Metro.

Nationally, pertussis rates are higher in Whites than in African Americans. The rate in Whites is more than two times greater than the rate seen in African Americans. In Louisville Metro, pertussis rates in 2007 were slightly higher in Whites than in African Americans. Compared to the national rates, Louisville Metro has higher rates for African Americans and lower rates for Whites. [9, 10]



What are we doing about it?

The current Communicable Disease Reporting/Surveillance model used in Louisville Metro requires that our partners in the community initiate a report of a specific reportable disease. Once the department has the report, individuals in the communicable disease division can investigate it and assess our community's risk as a result of each reported case. The number of staff available for surveillance activities and the use of programs and procedures to improve the timeliness and accuracy of disease reports from our partners, help shape the effectiveness of disease reporting in our community.

Louisville Metro Public Health and Wellness currently has two nurses who are assigned to notifiable disease surveillance activities. One additional nurse position with responsibilities divided between disease surveillance and TB clinic patient care is also available to assist in those activities. The 2.5 nurses and a local epidemiologist are responsible for notifiable disease reporting/investigation activities. STD investigations are under the direction of the Specialty Clinic. HIV/AIDS surveillance is handled by a nurse assigned to that task and is independent of other disease surveillance activities. TB surveillance and treatment are functions routinely under the direction of TB clinic staff.

The medical director for the communicable disease division is in his sixth year with the department. Our physician has a background in pediatric infectious diseases and supplies valuable clinical experience to the division as well as acting as a local point of contact between Louisville Metro Public Health and Wellness and other physicians in the community.

The Office of Vaccines and Immunizations conducts surveys of day care facilities and schools in Louisville Metro annually and conducts on-site audits at the request of and in collaboration with the Kentucky State Immunization Program regarding childhood immunizations. They also conduct educational programs and provide immunizations at clinic locations. Special walk-in clinics are also held during the influenza season in the fall and early winter to make influenza and other vaccines more accessible to members of the community.

The HIV/AIDS Prevention Program conducts community and targeted prevention education sessions and provides anonymous testing, counseling and partner notification services. As a component of the Health Department's AIDS prevention strategy, the methadone maintenance clinic was established to reach opiate addicted IV drug users. Louisville Metro Public Health and Wellness is the only health department in the state that receives funding from the state's Division of Substance Abuse for the treatment of opiate addiction.

The Specialty Clinic, which did receive funding from the CDC under the Syphilis Elimination Grant during the period covered by this report, diagnoses and treats sexually transmitted diseases. The clinic also provides confidential and anonymous testing, counseling, and partner notification. The clinic supported staff to provide more testing in the clinic as well as jails and homeless shelters in the community.

The Regional Tuberculosis Clinic provides diagnosis and treatment for individuals with active and latent TB infections. Clinic employees identify and test contacts of active TB cases to discover those individuals who are actively or latently infected as a consequence of contact with an active TB case. A team, comprised of a physician, an ARNP, nurses, and a social worker, provide case management for active cases. Directly Observed Therapy is provided to all patients with active TB to maximize the rate of treatment completion.

What else do we need to do?

Disease reporting and surveillance in Louisville Metro and in other communities around the world is a passive system that relies on non-health department partners in the community to initiate the disease report. Louisville Metro Public Health and Wellness continues to explore and develop cost effective techniques that will move Louisville Metro from a passive to a more active reporting system. The more active systems involve the health department discovering disease in the community before our partners have the opportunity to report it using traditional reporting methods. The department continues to explore opportunities to automate reporting from all of the hospitals in the community through a system under development from the State Department for Public Health.

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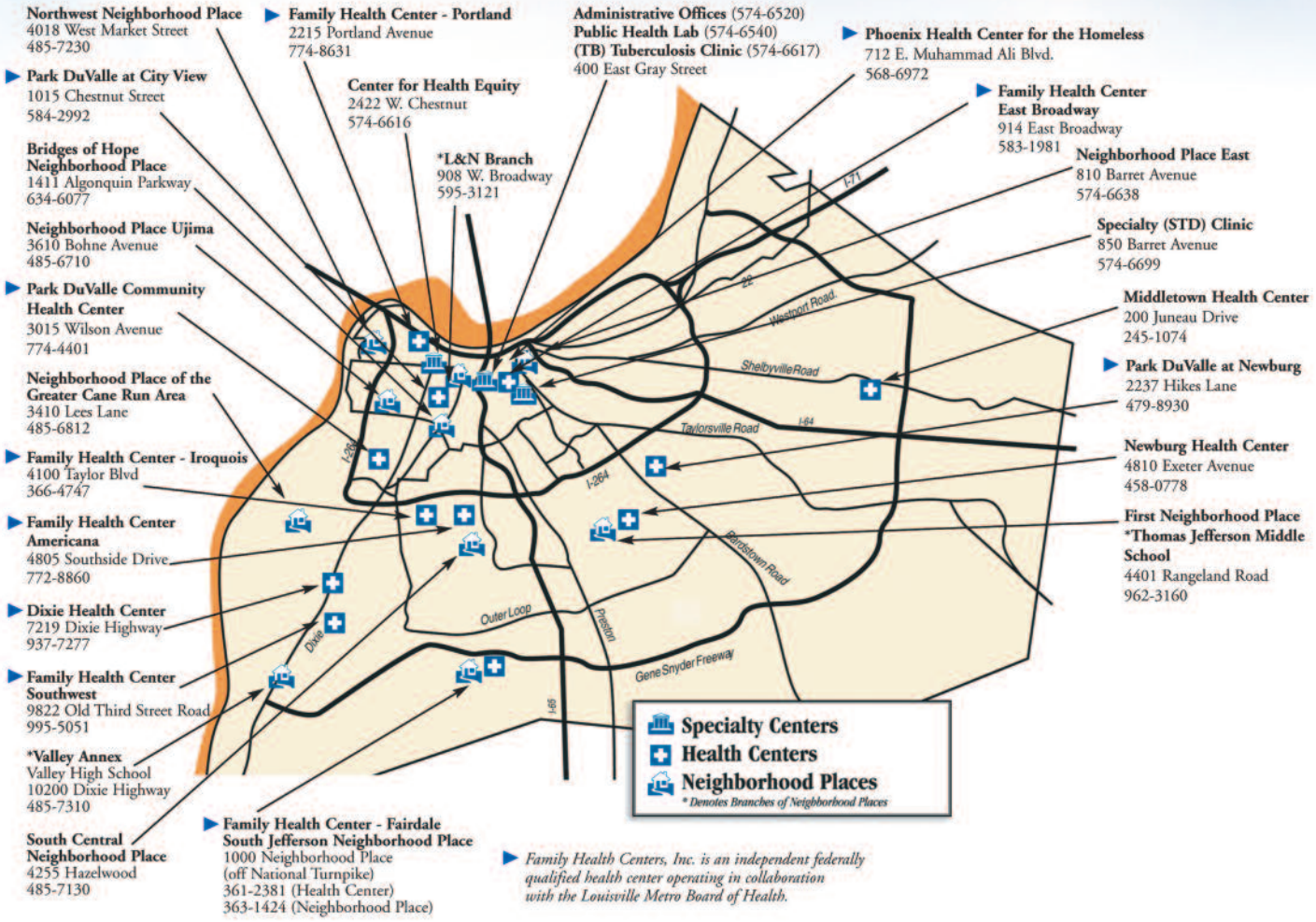
Public Health & Wellness Department, Family Health Center and Neighborhood Place Sites



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